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PATHOLOGIC INTERPRETATIONS OF ROENTGENOLOGIC SHADOWS IN PNEUMOCONIOSIS

CHAIRMAN'S ADDRESS

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Of the various medical aids in the problem of pneumoconiosis, roentgenology should be ranked first for the most accurate qualitative and quantitative measures of tissue damage in the living patient. Notwithstanding this fact, it must be admitted that such observations are not absolute. After all, what is impressed on the mind in viewing roentgenograms is only a well conditioned illusion, usually based on long experience in observations of serial roentgenograms on patients. As a matter of fact, absolute data can be established only on direct studies of the diseased tissues, requiring not only a study of the pathologic changes but also a study of the x-ray shadows of the lesions corresponding to anatomic changes. In this manner alone may the shadows accurately be translated into damaged tissue. While the pathology of silicosis has by no means been slighted, as the extensive work of Gardner,[1] Kettle,[2] Mavrogordato [3] and others will bear witness, the attempt to record the morbid anatomy of the disease into roentgenologic shadows has not been so frequent. Recently Sweany, Porsche and Douglass [4] reported a study in pneumoconiosis, attempting to correlate the chemistry and pathology, but the further comparison to roentgenologic shadows was only briefly outlined. The plan in this work is to carry out the correlation of the postmortem observations with antemortem roentgenologic shadows and, when possible, the clinical manifestations. This has been made possible by the fact that there were complete data assembled on most of the patients studied, including chemical examinations and postmortem lung roentgenograms.

It is my aim to complete this comparative study by comparing the pathologic changes to the postmortem and antemortem roentgenograms on types that either have not been described at all or have been insufficiently emphasized.

In the recorded descriptions of the various stages of uncomplicated silicosis, there is little to add to the standard descriptions of Irvine,[5] Pancoast [6] and others. The first stage has been described as an increase in the density and size of the hilus lymph nodes, a perivascular thickening (arborization) out toward the pleura, and a slight fine mottling in the parenchyma. In the second stage there are the typical nodular shadows, from 2 to 6 mm. in diameter, scattered out from the hilus, usually more numerous on the right. These shadows are usually round or oblong, with a soft even density. Finally, as these shadows become more numerous or coalesce into larger masses, the condition is classed as the third stage.

In a series of films on various forms of pneumoconiosis, however, these classic forms are really not common. The pathologic condition is frequently altered by various combinations of dust or commonly by infection, particularly tuberculosis. In silicosis the tubercle bacillus alters the disease considerably, depending on the dosage of bacilli, the amount of silicosis present and the time of appearance of either one with respect to the other, as well as other factors. The varying conditions produce a series of roentgenologic shadows that sometimes simulates a fibroid tuberculosis so closely that a proper diagnosis without a history is impossible. In such cases, serial roentgenograms are the only ones of any value.

There are other forms of pneumoconiosis that have rather definite characteristics but which have not been sufficiently emphasized. For example, pure anthracosis is rather typical, but not all the characteristics of it are well recorded. The rather definite shadows of an asbestosis is in need of wider appreciation. Anthracosilicosis that gradually shades into silicosis, and a combination of silicosis, anthracosis and tuberculosis that varies with the time of appearance of the various elements and the quantities of each, also present interesting combinations of roentgenologic shadows. Other modifying factors, such as iron and clay, not to mention the many organic dusts, leave much yet to be determined. By no means have these types been definitely established.

In order to facilitate this attempt it seems expedient, as has been suggested in a previous work,[7] to separate the field of pneumoconiosis into a convenient and logical working classification. This plan was based chiefly on the type of pathologic change, combined with the causative agent. The principal features of differentiating these groups depends on the presence or absence of specific fibrosis, the presence of lymphatic occlusion, or the presence of the toxic agent that causes irritation. Two or more factors may be associated in the same case; such mixtures are considered in a special group.

From the Research Laboratories of the City of Chicago Municipal Tuberculosis Sanitarium.

Read before the Section on Pathology and Physiology at the Eighty-Seventh Annual Session of the American Medical Association, Kansas City, Mo., May 13, 1936.

1. Gardner, L. U.: The Pathologic Reaction in Various Pneumoconioses, J. A. M. A. **101**: 394 (Aug. 19) 1933.
2. Kettle, E. H.: J. Path. & Bact. **28**: 201 (March) 1934.
3. Mavrogordato, A.: Publication 13, South Africa Inst. M. Research, 1922.
4. Sweany, H. C.; Porsche, Jules, and Douglass, J. E.: Arch. Path., to be published.
5. Irvine, L. G.: Symposium, Proc. Transvaal Mine Medical Officers' Assn. (special supp.) **10**: 44, 1931.
6. Pancoast, H. K., and Pendergrass, E. P.: Pneumoconiosis, New York, Paul B. Hoeber, Inc., 1926.
7. Sweany, H. C.: Am. J. Clin. Path., to be published.

These four main divisions, therefore, with some of the principal subgroups, may be listed as follows:

I. Coniofibrosis, including:
   1. Silicosis.
   2. Silicotuberculosis.
   3. Asbestosis and the like.

II. Coniolymphstasis, including:
   1. Anthracosis.
   2. Siderosis and the like.

III. Coniotoxicosis, including:
   1. Protein sensitization.
   2. Direct irritation and other causes.

IV. Mixed processes:
   1. Anthracosilicosis.
   2. Sidorosilicosis.
   3. Anthracosilicotuberculosis and other conditions.

I shall discuss these groups in order.

CONIOFIBROSIS

Coniofibrosis may be considered as a form of pneumoconiosis characterized by an exuberant growth of connective tissue due to a specific irritant. Under this heading are included silicosis, silicotuberculosis and asbestosis.

Silicosis.—Silicosis is that form produced by the action of silicon dioxide or certain silicates, resulting in the formation of fibrous tissue, usually in whorls from 2 to 5 mm. in diameter, along the course of the lymphatics from the hilus outward toward and including the lung parenchyma. As a result of researches of Stuart,[8] Simson,[9] Mavrogordato,[3] Gardner,[1] Kettle,[2] Policard [10] and others, we are able to outline the general course of events in the development of the disease. At present the action is viewed as that of a toxic irritant. Whether it is a direct poison as a result of some physical surface phenomenon acting on the cells or an indirect one due to the solubility of the silica has not been established. Heffernan [11] has proposed a theory that visualizes the solution of the silicon dioxide into silicic acid, which in turn dehydrates or denatures the vital parts of the cell in the process of its own hydration. Since silicic acid penetrates limestone, sandstone, wood and other substances on the earth's crust and produces petrification, it is not unreasonable to suspect a similar mechanism on living cells, although living cells would be injured long before a petrification could set in.

In any event the silica is inhaled into the lungs as particles usually less than 5 microns in diameter. The particles are phagocyted and are either expelled with the bronchial secretions or pass into and along the lymphatics. Once in the lymphatics, the phagocytes pass upward toward the lung hilus and fill the lymph node sinuses and lymphatic vessels. According to Gardner [1] there is considerable activity of these phagocytes, but Mavrogordato [3] and Policard [10] are of the opinion that the phagocytes are soon paralyzed by the silica and pass along with the current until they lodge where the whorls of fibrous tissue develop. The process continues until the fibrous whorls fill the lymphatics and later appear in the parenchyma. The stage of the disease depends on the location and number of these nodules, as already cited.

Fig. 1 (case 1).—a, typical distribution but unequal density of lesions, and a blurring characteristic of an encroaching tuberculosis in a silicosis. b, roentgen appearance post mortem. c, enlargement of mediastinal lymph nodes shown in rectangle of b. d, lateral section through main bronchi.

Silicotuberculosis.—After the entrance of the tubercle bacillus into a silicotic process, the character of the silicotic nodule changes depending on the time of appearance of the infection and the dosage of bacilli. If the infection is only recent, many of the nodules may be typically silicotic and intact, and the distribution more classic; but the longer the tuberculosis exists as a widespread process the fibrils of the whorls become blended into one mass and the whole nodule gradually takes on the appearance of a caseous nodular tubercle. Most of the cases encountered in industry fit into this group, because the tubercle bacillus is usually responsible for the termination of most cases of silicosis. Instead of the soft round or oblong shadow of from 3 to 5 mm., the nodules become larger and much denser, owing to the caseation with the gradual accumulation of calcium as the process progresses, until they become large masses or ulcerate into cavities. As the process advances it becomes more and more like a tuberculosis, until the roentgenograms are typical of this disease. Another variation due to tuberculosis is the atypical

8. Stuart, W.: Internat. Labor Off., ser. F., No. 13, 1930, p. 9.
9. Simson, F. W.: Symposium, Proc. Transvaal Mine Medical Officers' Assn. (special supp.). 10:44, 1931.
10. Policard, A.: Presse méd. 41:89 (Jan. 18) 1933.
11. Heffernan, P.: Tubercle 11:161 (Nov.) 1929.

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location of the lesions. If there is a benign tuberculosis already present, the process tends to become more exaggerated in the regions of the tuberculous lesions. Sometimes the location is confined to the upper half of the lungs and not at all like the classic distribution. In addition to the usual bilateral distribution of bronchogenic seeding, a hematogenous seeding usually confined more to the upper parts may also help to explain some

Fig. 2 (case 1).—a, large silicotic nodule (marked by arrows in figure 1) undergoing tuberculous caseation. b, a silicotic nodule without tuberculosis, for comparative purposes (hematoxylin and eosin stains; reduced from a photomicrograph with a magnification of 8 diameters).

of these anomalous localizations and more particularly the benign forms with no tubercle bacilli in the sputum. Sometimes the involvement is unilateral, and sometimes it is even situated along a single bronchial ramus.

In addition to the variations in the lung parenchyma, there are changes in the lymph nodes that are of characteristic nature. Here there is an infiltration of calcium underneath the capsule, which suggested the use of the term "egg-shell calcification" in an earlier work.[4] The first three cases represent some of the variations caused by an associated tuberculosis:

CASE 1.—A Yugoslavian, aged 46, who had worked for eighteen years with a drill as a rock miner but left the mines when he was 38, had always been well until he had an attack of pneumonia in 1927, another in 1929, and a third in 1931. Physical examination when he entered the sanatorium in March 1932 revealed the following: The general development was good but he was slightly asthenic and there was a coarse tremor of the fingers. Examination of the chest revealed a slightly cyanotic skin surface and a heaving respiration; an increased tactile fremitus on the right and left base, posteriorly; an impaired resonance on the left upper third, moist râles at the left base, with cavernous breathing above. The diagnosis was far advanced B. Because special culture and guinea-pig inoculations were positive but direct smears were always negative, pneumoconiosis was suspected.

Roentgenologic examination, March 15, disclosed that the apexes were hazy, the diaphragms could be faintly seen, the costophrenic angles were not well shown, and the cardiac shadow was displaced to the left. Scattered throughout both parenchymal fields were marked areas of mottling that involved the parenchyma out to the periphery and apex (fig. 1 *a*). Pneumoconiosis was suspected. The postmortem roentgenogram showed a large number of nodules out from the hilus and diminishing toward the periphery (fig. 1 *b*). These nodules varied in size and density from 2 to 10 mm. in diameter. They were usually round or oblong, and the larger ones seemed to be much denser than the others. The lymphatic nodes were all outlined by a faint shell-like calcification which is peculiar to silicotuberculosis.

There were numerous large slate and yellow gray nodules throughout the midportions of both lungs and some toward the apexes (fig. 1 *c*). These nodules were tough, like cartilage. The main lymph nodes out from the hilus, along the bronchi, were enlarged and a gray black with some streaks of yellow. Some of these nodes were dense and calcareous, and some of the nodules toward the base showed signs of softening.

Microscopically the lymph nodes all showed solid masses of old whorls of fibrosis, typical of silicosis. There was also a definite calcification, particularly around the borders, and a marked tendency to caseation in the centers. These lymph nodes were those which appeared on the roentgenogram. Some of the lesions showed a gradual transition from these silicotic nodules over the typical caseous tubercles (fig. 2 *a*). There was a considerable amount of emphysema throughout and a moderate amount of perivascular lymphangitis of fibrous nature.

This appeared to be a silicosis on which tuberculosis had gradually been superimposed. The important feature is that the silicotic nodules that became tuberculous seemed to increase in size and density on the roentgenogram in proportion to their tuberculization.

CASE 2.—An American, aged 39, had been a lead and zinc miner for fourteen years and had been out of the mines for five and a half years. The history was furnished through the courtesy of Dr. Jesse E. Douglass of Webb City, Mo. The onset of the disease occurred in 1929, when he noticed pains in the right lower side of the chest. The condition was diagnosed silicosis in September 1933 on admission to the hospital.

Fig. 3.—a, advanced silicotuberculosis with a marked unilateral aspect. b, section from the base, showing the character of the fibrosis; reduced from a photomicrograph with a magnification of 200 diameters; hematoxylin and eosin stains.

A physical examination Nov. 14, 1934, revealed on the right impaired resonance to the fourth rib and sixth dorsal spine, increased whispered voice to the third rib and dorsal spine, and bronchovesicular breathing to the bases. On the left there was impaired resonance to the third rib and sixth dorsal spine, increased whispered voice to the second rib and the sixth dorsal spine, bronchovesicular breathing to the base anteriorly and the third dorsal spine to the base posteriorly, coarse râles to the base anteriorly, and medium râles to the sixth dorsal spine.

The diagnosis was tuberculous infiltration throughout both lungs with probably some silicosis. The sputum was always positive for tubercle bacilli.

A roentgenogram taken Sept. 19, 1933, revealed a rather uniform nodulation out from the hilus on both sides. Many of the nodules were fairly typical of silicosis in size, contour and density. Others were larger, more dense or irregular. There was a huge cavity in the right upper and a smaller cavity in the left upper lobe. A picture taken fourteen months later revealed a spread of the ulcerative disease and an enlargement of the cavities in the left upper lobe. There was a marked contraction of the process upward, a fusion of many of the nodules, and in general more the appearance of a fibroid tuberculosis. At this time there was little resemblance to a silicosis.

An autopsy revealed a red gray lung with many firm pigmented hilus lymph nodes, one of which had ulcerated through the esophagus above the tracheal bifurcation, and two other areas on the lining showed some swelling and redness. There was a bilateral obliterative pleuritis. The heart had a definite erosion at the extreme apex in the visceral pericardium. The peritoneal cavity contained about 3,000 cc. of clear, straw-colored fluid. There were several large and small mucosal ulcers in the cecum. The liver was covered with a whitish and apparently organized exudate. There was a very marked enlargement and pigmentation of the pericardial, biliary and peripancreatic lymph nodes.

The postmortem roentgenogram revealed a bilateral fibroulcerative tuberculosis in both upper lung fields, with many small nodules in the base that were compatible with but not typical of silicosis. They could easily pass for nodular tubercles.

In the right lung there was a large fibroid cavity with vessels crossing it, filling the whole upper lobe. In the base there were numerous silicotic nodules with not a great deal of coal pigment. The hilus nodes were a mass of fused fibrous silicotic masses that had impaled the vessels and esophagus into a rigid mass. There were several pulsion diverticula in the esophagus due to adhesions of the lymph nodes. In the left upper lobe were several irregular cavities and large numbers of silicotic tubercles. In the lower lobe these nodules became smaller and fewer.

The microscopic picture here revealed the usual type of silicotic tubercle with a chronic fibroid tuberculosis. As the process became advanced, it appeared more and more like a tuberculosis. Without the earlier roentgenogram, the history and physical examination, an antemortem diagnosis of silicosis would have been risky, if not impossible.

Case 3.—An Austrian, aged 60, who worked as a molder for thirty-five years but had been away from this occupation for the last thirteen years, stated that he had been well until April 1932, at which time a cold and cough developed. He went to a doctor, and a diagnosis of tuberculosis was made because of positive sputum and roentgenologic evidence. There had been no contact with tuberculosis.

On examination the chest was emphysematous and barrel shaped, with retracted apexes and a flaring costal arch. There was impaired resonance in both upper lobes but hyperresonance below. There were râles in both upper lobes and in the base on the left side. There was a large cavity in the right apex. A diagnosis was made of pulmonary tuberculosis, far advanced B, with cavitation in the right, and pneumoconiosis.

A roentgenogram revealed a massive tuberculous process in the right upper and middle lobe, with ulceration and contraction (fig. 3). The aorta and trachea were pulled over. The right base and the whole left lung contained an increase in the peribronchial densities. There were many soft, flaky densities, irregular in outline and confluent in places, that resembled an acute infectious process. There were a few nodules, but they always varied a great deal in size and density. There was nothing to suggest silicosis.

The lung and pleura revealed much coal pigment. There was a large cavity in the right upper lobe which extended through the septum and into the lower lobe. There were a few cavities in the left upper lobe. Many nodular masses were present throughout the whole right lower and middle lobe and the left lung, which were peculiarly fibroid in character. There was nothing to suggest a silicosis.

Fig. 4.—*a*, appearance in a patient with a pure anthracosis. *b*, bronchiectasis, an old right apical tuberculosis, and a terminal pneumonia as viewed roentgenographically after death. *c*, lateral section through the bronchi of the gross specimen, revealing bronchiectasis and extreme pigmentation.

On microscopic examination of the lymph nodes at the hilus there were masses of phagocytes full of black pigment. There was some autolysis, leaving open spaces. There were occasional patches of hyalinized fibrous tissue throughout both lungs, but not in whorl formation. The perivascular lymphatics were packed with black and brown pigment in the cells and free. Some of the masses were from 2 to 7 mm. in diameter, and some were in confluent masses from 1 to 2 cm. across. They were rarely circumscribed as a typical silicotic nodule but on irregular masses of phagocytes that have originally filled the lymphatics to overflowing and have changed to fibrous tissue in situ.

Chemical analysis revealed 2.7 mg. of silica per gram of dried lung, definitely over the normal range.

This case illustrates what appears to be a non-nodular silicotic fibrosis and tuberculosis situated chiefly unilaterally. It should emphasize some of the limitations of roentgenograms of pneumoconiosis in the presence of tuberculosis.

Asbestosis.—Although the destructive types of pneumoconiosis are perhaps not all yet known, there seems to be good cause to list asbestosis as an entity under the general heading. This has been made possible by

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the pioneer work of Cooke,[12] Mereweather,[13] Gloyne [14] and others. As the asbestos fibers are usually from 100 to 200 microns in length, they rarely reach the alveoli but lodge in the bronchioles. A few fibers pass into and through the wall of the bronchiole, causing a focus of involvement in and around the bases of the finer bronchioles. The pathologic disorder is not a nodule as in silicosis but more a diffuse fibrous lobulitis. The process extends out from the hilus toward the base. After a period of two or three months in the body the fibers appear to be acted on by the tissue juices, producing peculiar club-shaped "asbestos" bodies, which can be seen in the sputum or tissues. As the process begins the lesions are small and they may not be visible on the roentgenogram. Owing to the large numbers of them they become superimposed and present a finely stippled or ground glass appearance. There is a gradual darkening of the film passing out from the hilus. While asbestosis is not so prone to become tuberculous as silicosis, it does possess this hazard. According to Gloyne,[14] about 48 per cent become tuberculous. There is ample reason, therefore, to add to the grouping a tuberculous asbestosis, if the occasion ever demands.

CONIOLYMPHSTASIS

The second main group includes only dusts that act principally by blocking the lymphatics until their normal physiologic function is so impaired that normal resilience is lost, lymph drainage is impaired, and acute infections readily occur. Perhaps the most classic illustration of this was given by Zenker [15] in 1867 in which a woman had worked in a room of English red (red oxide of iron). Coal dust has a similar effect. In the pure inert dusts there is rarely any fibrosis, especially nodules or whorls. The dust is phagocyted and owing to the activity of the phagocytes much of it is expelled; some, however, passes into the lymphatics and up toward the hilus. In the worst types the lymphatics are completely blocked and are essentially functionless.

CASE 4.—A Pole, aged 45, was a coal miner for twenty years. There was nothing else pertinent in his early history. He had been troubled with a cough, productive in nature and associated with a pain in his chest and dyspnea on exertion for fifteen years. On admission to the sanatorium his blood pressure was 118 systolic, 68 diastolic. His chest was rather flat, expansion was limited, the respiratory movements were short and rapid, and the diaphragmatic excursion was poor. The percussion was dull over the lower lobes; auscultation revealed short and harsh breath sounds; there were rough breath sounds over the entire chest, and râles in both bases. The diagnosis was moderately advanced tuberculosis with pneumoconiosis and a suspected bronchiectasis.

The roentgenologic examination, April 7, 1928, revealed hazy apexes, a regular diaphragm, and slightly obliterated costophrenic angles. The cardiac shadow was dimmed by the haziness that involved both fields. There was a fanning out of small, irregular, soft, flaky densities on both sides at the hilus. For this reason anthracotic pneumoconiosis was suggested instead of silicosis (fig. 4 *a*). The postmortem roentgenogram in addition revealed an acute pneumonic infiltration in the base of the right upper lobe, a small quiescent tuberculous focus in the right apex measuring 2 cm. across, an old primary complex at the left base and hilus, and a fusosaccular bronchiectasis of all the basilar bronchi (fig. 4 *b*). The Wassermann reaction was positive and the sputum negative for tuberculosis. White blood cells numbered 13,750, and other signs were essentially negative.

In the lungs there were thrombi of several branches of the pulmonary artery; a bronchiectatic cavity in the base of the right upper and in the base of the middle, and many in the base of both lower lobes; a healed primary tubercle in the base of the left lower lobe; a small fibroid tuberculous cavity in the right apex; a pneumonic consolidation of the lower part of the right upper lobe with necrosis and cavity formation, and a dense, even distribution of coal pigment throughout (fig. 4 *c*). On microscopic examination these changes were confirmed. In addition there was a marked emphysema; the lymphatic vessel and lymph follicles were packed with phagocytes containing black pigment, and the alveolar walls were dotted with fine pigment particles. The various microscopic features are illustrated in figure 5 *a* and *b*.

CONIOTOXICOSIS

The third group is somewhat apart from the other types in that the irritants affect the tissues directly or after a period of sensitization to a specific protein. Most of these are acute processes such as a bronchitis or a pneumonitis. The reports of Cadham [16] on wheat rust and Figley [17] on castor bean dust apparently belong

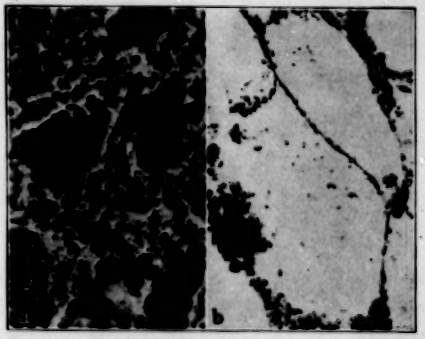

Fig. 5.—*a*, section of a markedly pigmented portion of lung shown in figure 3, showing the marked accumulation of pigment in the perivascular lymphatics and lymph spaces. *b*, pigment in the alveolar walls (hematoxylin and eosin stains; reduced from a photomicrograph with a magnification of 450 diameters).

to this group. The roentgenographic appearance of these types has been shown by Towey and his associates [18] in patients exposed to spores of a fungus, Coniosporium corticale. The shadows revealed a distribution similar to uncomplicated silicosis, but the lesions were soft and irregular and conformed to the acini similar to an acute bronchogenic spread of tuberculosis. The disease disappeared when the patients were removed from the environment.

It is conceivable that any organic dust may produce a similar type of pneumonitis. In addition, direct irritants and caustics may be included in the same category.

MIXED PROCESSES

There are actually few people with pneumoconiosis who have not been exposed to a mixture of two or more dusts. Some dusts are composed of substances

12. Cooke, W. E.: Brit. M. J. **2**: 578, 1920.
13. Mereweather, E. R. A.: Tubercle **15**: 69 (Nov.), 109 (Dec.) 1933. 152 (Jan.) 1934.
14. Gloyne, S. R.: Tubercle **14**: 445 (July), 493 (Aug.), 550 (Sept.) 1933.
15. Zenker, F. A.: Deutsches Arch. f. klin. Med. **2**: 116, 1866-1867.
16. Cadham, F. T.: Asthma Due to Grain Rusts, J. A. M. A. **83**: 27 (July 5) 1924.
17. Figley, K. D., and Elrod, R. H.: Endemic Asthma Due to Castor Bean Dust, J. A. M. A. **90**: 79 (Jan. 14) 1928.
18. Towey, J. W.; Sweany, H. C., and Huron, W. H.: Severe Bronchial Asthma Apparently Due to Fungus Spores Found in Maple Bark, J. A. M. A. **99**: 453 (Aug. 6) 1932.

like granite in which there are several silicates as well as silicon dioxide present. Others are inert, as coal and iron. Dusts in coal mines are composed of carbon and a variety of other substances including silicates and silicon dioxide. Occasionally in bituminous coal miners there is no fibrosis, as shown in figure 5. When the practice of rock dusting was carried out to prevent explosions from the carbon dust, silicosis occurred much more frequently in coal miners. In most coal miners there is a mixed process that has been termed by Cummins [19] anthracosilicosis. Naturally the manifestations vary with the particular locality, but in general there is a rapid accumulation of carbon with a gradual development of silicosis. The silicosis seems to be greatly retarded by the coal dust, as suggested by Cummins,[19] Sampson [20] and others. The roentgenogram is at first that of an increase in the thickness of the hilus lymph nodes and an increase in the "arborization"—thickening in the peribronchial and perivascular lymphatics due to the dust. Later nodules begin to appear in the parenchyma, which vary in size from a few millimeters to many centimeters. These tumor-like masses seem prone to appear in certain mixtures of inert dust and silicon dioxide, with or without tuberculosis. The inert dust (coal, iron and the like) seems to alter the circulation in the tissues so that a partial atelectasis results, to be followed by fibrosis, resulting in fibrous tumor, composed of fibrous tissue with phagocytes laden with dust in between the fibers. In the ordinary coal miner with low silica the terminal condition is usually bronchitis or pneumonia, but in the lead and zinc miners of the Ozarks, where the carbon pigment in the quartz is low compared to the silica, the result is a moderate anthracosis with a strong silicotic tendency. Sooner or later they are usually contaminated with the tubercle bacillus. The type of roentgenogram of these patients was first shown by Childs,[21] and the pathology has been described in earlier work from this laboratory.

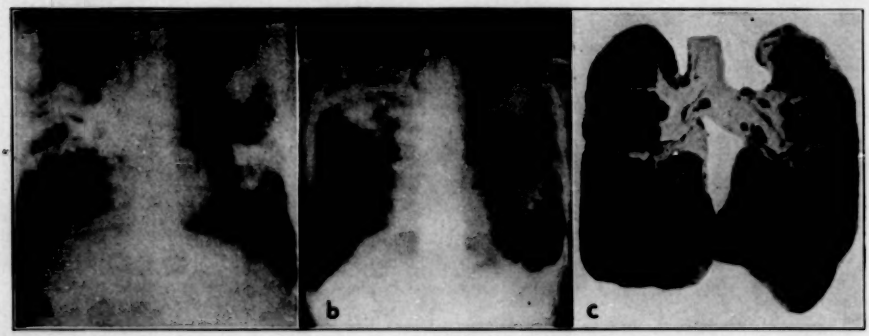

Fig. 6.—*a*, silico-anthracotuberculosis, March 29, 1928. *b*, appearance six years later. *c*, lateral section of lung showing typical tumor-like masses.

Case 5 (also furnished by Dr. Douglass).—A man, aged 62, a lead and zinc miner who had worked as such for seventeen years, had been out of the mines for eight years before his death. He had one brother and one sister who died of tuberculosis. For two or three years prior to 1927 he had noticed a gradual development of dyspnea with a fairly persistent cough and occasional expectoration. Jan. 14, 1928, he was admitted to the hospital with a diagnosis of silicotuberculosis.

A physical examination revealed on the right an increased whispered voice to the second rib and the third dorsal spine, and bronchovesicular breathing to the third rib and sixth dorsal spine. On the left there was increased whispered voice to the second rib and the third dorsal spine, bronchovesicular breathing to the second rib and sixth dorsal spine, and a few medium râles to the base, anteriorly.

The roentgenographic studies extended over a period of nearly seven years and revealed the development of the large tumor-like masses. The interesting feature of these cases, especially this one, was that there were no classic signs of silicosis. The shadows appeared as loosely hanging clouds, at first filling the greater part of both upper lobes. The margins of these cloudy areas were irregular. They passed downward toward the middle of the lungs as small foggy festoons. Toward the base on the right the cloudy patches became smaller and disappeared entirely at the beginning of the lower third. On the left they followed the bronchi almost to the diaphragm, but became smaller and more scattered (fig. 6 *a*). The principal change over the seven years was an increase in the density of the shadows of the upper lobe out to the ribs and a marked thinning out at both bases, owing to emphysema. On the left the massive shadow began to shrink inward toward the mediastinum, leaving a sharp border of the shadow made by the outer border of the upper lobe (fig. 6 *b*).

After three years of alternate illness and well being, the patient began to fail permanently. In the fall of 1932 he had paroxysmal attacks of cardiac fibrillation, which became persistent during the following winter. Early in the spring of 1933 the heart was digitalized and was kept so until death. During the seven years of observation the physical signs in the chest on fifty-three examinations showed no changes. Sixty specimens of sputum were negative and three were positive for tubercle bacilli. He was found dead in bed in January 1935, presumably of cardiac failure.

A postmortem roentgenogram revealed a huge black mass in the right upper lobe, a smaller one in the apex of the right lower lobe, a large one in the left upper lobe and many small masses in an emphysematous base. There were several semicalcified masses in the hilus and bronchial lymph nodes from 1.5 to 2 cm. in diameter. An autopsy performed by Drs. William M. Kinney and Raymond Kuhn revealed that the tracheobronchial glands were large and black, as were those just below the diaphragm about the cardiac end of the stomach, the peripancreatic and the mesenteric. Suggestive small black areas were found in the spleen and possibly some macroscopic areas in the liver.

In our examination of the lungs the whole right upper lobe was black, fibrous and slightly contracted with an early excavation in the center, measuring between 2 and 3 cm. The diam-

19. Cummins, S. L.: Lancet 1:235 (Jan. 13) 1931.
20. Sampson, H. L.: Silicosis Symposium, Saranac Lake, N. Y., 1934.
21. Childs, S. B.: Bull. 85, U. S. P. H. S., 1917, p. 31.

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eter of this black mass was about 12 cm. There was a large black nodule in the apex of the right lower lobe measuring from 3 to 4 cm.; a large mass out from the hilus in the left upper lobe extending along the left subapical bronchus, measuring 5 by 7 cm.; small fibrotic nodules throughout both bases, and large calcified masses in the hilus lymph nodes (fig. 6 *c*). The microscopic appearance has been well shown in former work, previously cited.

Chemical analysis revealed 6.3 mg. of silica per gram of dried lung.

Judging from the period of time we were able to follow this patient, it may be assumed that this condition was forming over a period of twenty or more years. It was apparently the result of a silica exposure with a moderate carbon pigment contamination on which slowly developing tuberculosis was superimposed.

SUMMARY

1. A correlation of the antemortem and postmortem roentgenograms with the pathologic changes has been attempted in various unclassified types of pneumoconiosis.

2. Tuberculosis with silicosis renders a roentgenographic examination difficult or impossible in the majority of patients affected with silicosis, because of atypical characteristics or the location of the lesions. The localization resulting from tuberculosis may be predominantly that of a hematogenous tuberculosis, situated bilaterally in the upper parts of both lungs, of a bronchogenic spread bilaterally, or of a bronchogenic spread unilaterally, and even along a single bronchial ramus.

3. The involvement of the lymph nodes are quite characteristic, forming what have been termed "egg-shell" calcifications.

4. Pneumoconiosis, resulting from a lymphatic congestion due to coal, iron, and the like differs from silicosis and silicotuberculosis sufficiently that an involvement by such inert dust may be anticipated many times on the antemortem roentgenograms.

5. When the inert dusts are combined in some yet undetermined proportions with a silicosis or a silicotuberculosis, it seems to result in a complex that possesses a variety of bizarre formations, some of which simulate single or multiple neoplastic masses on the roentgenograms.

North Pulaski Road and Bryn Mawr Avenue.

The Early Diagnosis of Pneumonia.—To make an early diagnosis is often to win half the battle in a case of serious illness, for as a rule treatment only fails because it is not administered sufficiently soon. Take, for instance, early pneumonia. In this disease there may be no chest signs to commence with, except widespread pain, but there are, I think, three signs which, if present, enable one to make a definite diagnosis and so to free one's mind of the incubus of the unknown. The first is the working of the nostrils, which is present even when there may be no very obvious respiratory embarrassment; and it is a sign which the best of physicians I have met, the late Dr. Ogle, continually impressed upon his clerks. The second is a pungent burning skin, which is immediately felt by the trained hand, and which may exist in the absence of a very high temperature, and for which I have never heard any adequate physiological explanation. And the third is the complete absence of chlorides from the urine. These three signs form a valuable trinity to remember, for the more one practices physic the greater is the realization that one physical sign is worth half a dozen symptoms.—Howard, Christopher: The Art of Medicine, *Lancet* 1:754 (March 28) 1936.

INTESTINAL OBSTRUCTION DUE TO AMEBIASIS

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As is well known, Endamoeba histolytica is an invading parasite living in and subsisting on the tissues, most often in the material found in and beneath the mucous membrane of the colon. Usually the pathologic condition noted is moderate thickening of the mucosa with surface ulcerations. In practically all cases antiamebic treatment causes a rapid reduction of the disorder, this often being one of the striking phenomena noted in the treatment of this disease. In such instances one commonly observes a complete reduction of the pathologic manifestations, the patient being apparently well, and yet cysts may continue in the stools, patients proving themselves capable hosts in maintaining both themselves

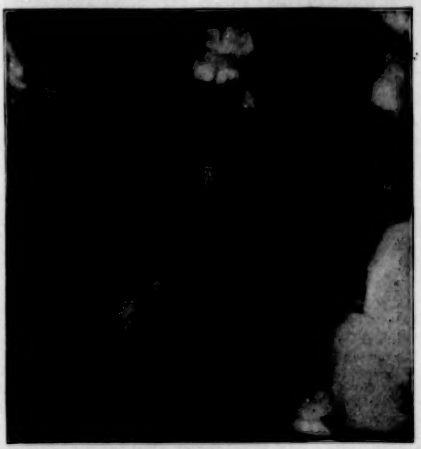

Fig. 1.—Roentgen appearance, Sept. 16, 1935.

and their amebic guests in comfort. Sometimes in these instances, with whatever antiamebic treatment and how many times carried out, Endamoeba histolytica cysts continue to be present and thus the potential of recurrence of clinical symptoms is always present. In the majority of instances when well treated, the disease is permanently cured and the stools continue to be negative to both the vegetative organisms and the cysts. In those in which continued negative stool examinations are not accomplished, for obvious reasons, periods of antiamebic treatments should be carried out. No case should be considered cured without two criteria being present: first, negative stools for cysts for at least six months and, second, x-ray examinations that show a normal colon. The latter to me is the most important because negative stools may be encountered, yet the x-ray examination shows the presence of lesions. Proctoscopic examinations may be added to these but are not to be depended on clinically. This is because the disease involves the rectum with manifest lesions in only 25 per cent of the instances, and even when they have disappeared cysts may be present, and the symptoms of the disease often recur.

A man, aged 50, with a nonsignificant family and personal history, was referred by Dr. Costello of Dover, N. J., for the diagnosis of abdominal cramps of one month's duration, severe enough to have kept him in bed for three weeks and only slightly benefited by treatment. Occasionally there was blood with the movements, for which laxatives were required, and after which there were three or four days of loose movements with more noticeable blood. At the first visit he gave the history of having been in Chicago during the pandemic of

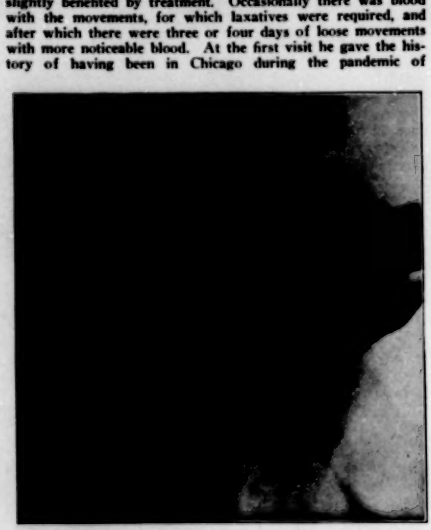

Fig. 2.—Roentgen appearance, January 1936.

amebiasis and having stopped at the Congress Hotel about eight weeks before the onset of the abdominal cramps.

The examination, Nov. 3, 1933, disclosed a generally tender abdomen, mostly in the sigmoid region, a generally inflamed rectal mucosa with small, whitish areas, one of which showed the presence of the vegetative forms of Endamoeba histolytica, the Cleveland medium culture also being positive.

He was placed on chiniofon, developing more severe cramps the first three or four days, and made a symptomatic recovery, the stools becoming negative to endamebas and cysts on direct and culture examinations in several specimens from Nov. 20, 1933, to Jan. 30, 1934. Two months after the treatment the patient looked and felt well and had gained 30 pounds (13.6 Kg.). In monthly examinations of his stools after January 30 an occasional histolytica cyst was encountered. Having had a slight intestinal upset for several days in June 1934 he was put on a full course of carbarsone, after which the stools were negative for cysts until September 1934, when, after three days of abdominal cramps and slight looseness of the bowels, the stools were again positive to the vegetative organisms and he was put on a full course of vioform. He was not seen again until Sept. 10, 1935, one year after the former visit, when he complained of constipation that had been developing slowly over about a week's time, but which he could control by simple laxatives. No examination of the stools had been made from September 1934, the patient considering himself cured. He was reestablished on vioform and given laxatives. Two days after his last visit he left for Chicago, having had no bowel movement in the meantime. He was operated on for complete intestinal obstruction with fecal vomiting, September 17, in the Presbyterian Hospital in Chicago by Dr. H. A. Oberhelman, who sent the following report, briefly expressed:

"He was operated on as an emergency for intestinal obstruction. We, however, had occasion to do a proctoscopic examination and a colon fluoroscopy and found a definite annular obstruction at the rectosigmoid junction. At operation this was verified as a complete, firm, annular neoplasm and I noted the entire colon thickened from hypertrophy. The abdomen was markedly distended, the distention involving the entire colon and ileum. Free but turbid fluid was found in the peritoneal cavity and the sigmoid colon and peritoneum. The peritoneum was dull from shreds of fibrin. A cecostomy was done and several specimens of stool were cultured but none were positive for amebas. He continued to improve for two weeks, when suddenly he began passing some blood and pus from the rectum. The feces were found to be full of amebas. Vigorous antiamebic treatment was instituted with emetine, to which he responded. Five weeks after his operation, while under treatment, his abdominal wound became larger, inflamed looking and started to slough. Examination of material from the edge of the wound was positive for amebas, which promptly responded to applications of chiniofon solution and irrigations of chiniofon through the wound. He has practically recovered except for his neoplasm, which we will be obliged to remove surgically and it will entail a combined abdominoperineal resection."

During his stay in the hospital two x-ray examinations were made. The film of September 16 (fig. 1), before antiamebic treatment was instituted, shows a mass at *A*, strictured section at *B* (which probably was the site of occlusion), and general involvement of the descending colon above it, this also involving all of the sigmoid. The x-ray examination of November 8, after about ten days of antiamebic treatment, showed a reduction of the mass at the distal portion of the sigmoid and improvement of the strictured and intervening portion.

Dr. J. W. Foster reported that the patient was taking vioform when first seen, September 14, and took 1 grain (0.06 Gm.) of emetine for four days and 3 grains (0.2 Gm.) of carbarsone for eleven days, 2 grains (0.13 Gm.) for fourteen days and

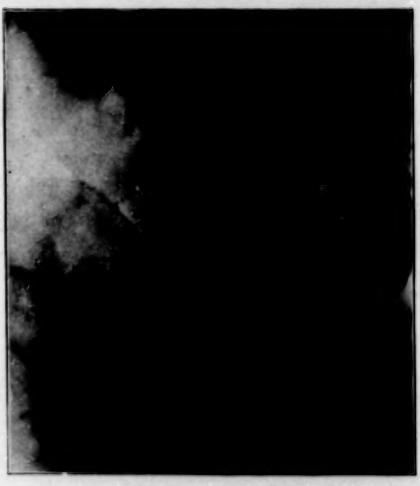

Fig. 3.—Roentgen appearance, March 1936.

3 grains for ten days. November 25, emetine, 2 grains for two days and 1 grain for seven days, and 3 per cent solution of chiniofon was applied to the colostomy for sixteen days, three tablets daily for five days, a retention enema of 200 cc. of 2 per cent solution through the colostomy for two days and 100 cc. for three days. Stools were negative for amebas for some time (four straight specimens).

December 16 he again came under my observation. He stated that he had gained from the low point of 90 to 115 pounds (41 to 52 Kg.), the bowels moving about every thirty-

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six hours, with fairly normal stools. Proctoscopic examination disclosed slight congestion of the upper part of the rectum and a thickened, granulomatous looking mass in the lower sigmoid (impassable). Roentgenograms showed a much more normal looking sigmoid than the former films, the descending colon was apparently normal, with no strictured sections (not seen in after-defecation films), and a possibility of a strictured state at *A* (fig. 1). Stools showed a few cysts. The patient was placed on 1 grain of emetine a day for ten days and chiniofon, full course, with vitamin B and diet regulations similar to types used in pernicious anemia.

At the next visit, Jan. 20, 1936, on proctoscopic examination, no lesion or pathologic condition was observed; the stools were negative for amebas and cysts, with cylindric stools; the patient felt perfectly well; roentgenograms showed a more normal sigmoid with still a suggestion of stricture at the distal portion, but judged by the large cylindric bowel movements each day and the normal caliber of this section in the after-defecation enema films, it was judged as of no significance. He weighed 129 pounds (58.5 Kg.).

When seen on February 6 he had not been taking antiamebic treatment for three weeks, and he felt well, still weighed 129 pounds and the stools and culture were negative. Examination of the blood revealed: red blood cells 4,270,000; hemoglobin 92 per cent; white blood cells 7,200, with the percentage of neutrophils 71, lymphocytes 20, mononuclears 6; eosinophils 1, basophils 2. Because of the history and the persistence of an ironed-out appearance and some irregularity in the rugae of the sigmoid, a course of 1 grain (0.06 Gm.) of emetine for ten days and a full course of chiniofon was reestablished. Roentgenograms, March 2, showed a marked improvement in the entire colon, definitely also in the sigmoid, with no appearance of the strictured state at the rectosigmoid junction, as noted on the clysma and evacuation films. Rugae at that point were normal. The case, however, is resisting antiamebic treatments of all kinds and will require persistence with them from time to time. This is important, too, in connection with the eventual possibility of carcinoma. Films taken up to April 1936 show the strictured condition to be normal, but the transverse colon is still abnormal.

Cases of partial degrees of obstruction in amebic inflammation of the cecum and ascending colon are not uncommon, but occlusion distal to the middle of the transverse colon is most rare. In the case mentioned, the obstruction occurred in the sigmoid and was due to pathologic changes in the sigmoid walls. Most of the cases of partial obstruction are due to occlusion states in the right colon, healing leaving scar tissue, peritoneal adhesions, pressures of postcecal abscess or hepatic abscess of larger size pressing on the intestine. These with the other sequelae are noted in the chronic case. The time from the infestation to complete obstruction in this case was about twenty-two months, with three courses of antiamebic treatment in the meantime and the patient on vioform at the time of obstruction.

Complete intestinal obstruction due to enteric involvement above and localized in the sigmoid has not been disclosed in a search of the literature of the library of the New York Academy of Medicine. Several authorities have recorded instances of partial obstruction, notable among which are Sambuc,[1] Sellards,[2] Grall,[3] Dobell and Low,[4] Spangenberg,[5] Vergoz and Hermenjat-Gerin,[6] Craig,[7] and Reed and Anderson.[8] Desjardins[9] calls attention to masses consisting of a true neoplasm of amebic origin or to an inflammatory mass secondary to an amebic ulcer or to an amebic ulcer alone being mistaken for carcinoma. He describes a patient with partial obstruction showing a hard, irregular mass with filiform narrowing, the clinical picture being that of cancer but due to inflammatory products of an ulcer plus spasm. Gunn and Howard[10] report three cases of amebic granulomas simulating cancer, the pathologic manifestations consisting of "isolated, chronic ulcer with progressive erosion of the wall of the bowel." They draw attention to the symptoms, physical signs and x-ray appearances being identical with carcinoma and the rarity of the condition. Rogers[10] refers to two cases of supposed carcinoma in which amebas were found and which were cleared up by emetine treatment. Reed and Anderson[8] mention having seen three cases in which definite tumor masses were found in the colon, but in none was the mass isolated (as it was in the case here reported). They draw attention to the significance of extension of the lesion to various parts of the colon as strongly against a diagnosis of cancer (such was the fact in this case). Gunn and Howard,[10] Hines,[11] and Reed and Anderson[8] draw attention to the coexistence of amebiasis and cancer, regarding which Reed and Anderson state that chronic amebiasis affords an excellent background for the development of cancer as a sequela and report four such cases. They draw attention to the importance of handling cases of amebiasis as a prevention of possible carcinoma, especially to lesions in the sigmoid and rectosigmoid regions. This is especially interesting in connection with the case reported, because, while the strictured state that caused the obstruction was in the upper portion of the sigmoid and entirely subsided under treatment, there was a granulomatous mass also in the rectosigmoid junction, which seems to have left an effect on the caliber of the intestine yet which granulomatous mass totally subsided and which is not interfering with normal bowel movements. Note should also be made that in the films taken after evacuation of the barium sulfate enema this is not noted, and normal mucosal rugae are present in this area, such not being possible of carcinoma existed.

As to the possible site of obstruction due to intraenteric occlusion, Clark[12] reports the following: About 60 per cent possessed ulcers more or less through the colon, while 40 per cent had a local distribution in more dependent parts of the colon and appendix. In the order of incidence, they were placed as follows: The cecum and ascending colon, the rectum and sigmoid, and the appendix. Kartulis in Egyptian cases found the following distribution of the lesions approximately: the entire large intestine involved 50 per cent of the cases; ascending colon and sigmoid flexure only 25 per cent; cecum with either ascending or descending colon

1. Sambuc, E.: Notes cliniques sur les abcès du foie au Tonkin, Ann. d'hyg. et méd. col. **16**: 48-103, 1913; pp. 68 and 74; one case of intestinal occlusion, same case as quoted on p. 724 of Vergoz and Hermenjat-Gerin.[6]

2. Sellards, A. W.: Amebiasis, in Christian, H. A.: Oxford Medicine **3**: 799-816, 1929; p. 808, one personal case.

3. Grall, C.: Hépatite des pays chauds; Abcès endémique due foie, in Grall, Mathis and Leger: Traité de pathologie exotique, Paris, J. B. Baillière et fils **4**: 372-605, 1930; p. 494, one case of intestinal obstruction caused by amebic hepatitis.

4. Dobell, C., and Low, G. C.: Amoebiasis, in Byam, W., and Archibald, R. G.: The Practice of Medicine in the Tropics, New York, Oxford University Press **2**: 1342-1386, 1922; p. 1368, intestinal obstruction due to old and extensive adhesions in not unknown.

5. Spangenberg, J. J.: Sobre un caso de hepatitis amebiana dano un sindrome de oclusion intestinal a repeticion, Arch. argent. de enferm. d. ap. digest. y de la nutricion **7**: 165-186, 1931.

6. Vergoz and Hermenjat-Gerin: De la rupture des abcès amibiens du foie dans les cavités séreuses (plèvre-péritoine-péricarde), Rev. de chir., Paris **51**: 680-734 (Nov.) 1932; authors quote Sambuc's[1] case on p. 724.

7. Craig, C. F.: Amebiasis and Amebic Dysentery, Springfield, Ill., Charles C. Thomas, 1934, pp. 167-168; intestinal obstruction, with mention of personal cases.

8. Reed, A. C., and Anderson, H. H.: Amebiasis and Cancer of Colon, Am. J. M. Sc. **191**: 237-250 (Feb.) 1936.

9. Desjardins, A.: Les pseudo-cancers coliques d'origine amibienne, Bull. et. mém. Soc. chir. de Paris **21**: 443, 1929.

10. Gunn, Herbert, and Howard, N. J.: Amebic Granulomas of the Large Bowel, J. A. M. A. **97**: 166 (July 18) 1931.

11. Hines, L. E.: A Form of Polypoid Colitis as a Late Stage of Amebic Dysentery, J. A. M. A. **81**: 12 (July 7) 1923.

12. Clark, H. C.: The Distribution and Complications of Amebic Lesions Found in 186 Postmortem Examinations, Am. J. Trop. Med. **5**: 157 (March) 1925.

or rectum 25 per cent. The appendix was involved only nine times in several hundred cases and the small intestine never.

In all instances of inflammation of the intestine, bacterial invasion of the wall exists. This is a secondary process irrespective and independent of the initial cause. This no doubt adds to the thickening of tissue, but when it is possible to control the initial cause (such as the destruction of pathologic amebas), the inflammation subsides. It is very probable that in obstructive conditions of the colon due to amebiasis the secondary infection is due to organisms of the typhoid-dysentery-coli group, together with low grade streptococci or staphylococci. Injection of the wall as noted at operation with the deposit of fibrin on the peritoneal surface indicates inflammation.

CONCLUSIONS

In a case of intestinal obstruction with fecal vomiting in which the occlusion was complete and occurring in the left side of the colon (sigmoid), the lesion was intra-enteric entirely and cleared up under antiamebic treatment.

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HYPOPHYSEOTHYROGENIC ADIPOSITY AND EMACIATION

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In reporting, in the autumn of 1934, three cases of extreme emaciation of pituitary type in young girls, I [1] intended to draw attention to a form of morbid loss of weight heretofore but little considered and at the same time propose a method of treatment for it—medication with thyroid preparations. The syndrome is distinct, easily delimited and evidently not at all unusual. It comprises in the main—besides loss of weight—anorexia, constipation and amenorrhea, hypothermia, bradycardia, arterial hypotension and hypometabolism, as well as a tendency to hypoglycemia and prolongation of the dextrose tolerance curve. Von Bergmann,[2] who earlier in the same year published reports of a series of fifteen similar cases, adds to these an inclination to discomfort in the upper part of the abdomen and to an increase of the sedimentation rate of the red blood corpuscles. Two of my three cases showed definite phlebosclerosis, which disappeared entirely as the patient recovered; since then Rothmann [3] has recorded the same observation in one case. In all three cases the fingers were long and narrow, tapering "madonna" fingers, which may perhaps be interpreted as a tendency to acromicria. Hawkinson [4] has described a case with falling of the hair (pubic and axillary hair, eyebrows, eyelashes and hair on the head). The whole symptom complex is qualitatively exactly like Simmonds' [5] pituitary cachexia, but much milder, a Simmonds disease in miniature, reversible and without demonstrable anatomic lesion of the hypophysis.

Von Bergmann considers that there is in the first place an insufficiency of the anterior pituitary lobe, with associated disturbances in the ovaries, the thyroid and the adrenals, often arising in connection with an overstraining of the endocrine system at puberty, pregnancy, labor and the menopause. The general asthenia with cor parvum, which is often observed in such cases and which was very prominent in all my cases, is considered by him to be a disposing factor. In accordance with this conception, von Bergmann has treated his patients with pituitary, mainly by injection or by means of transplantation, and has noted favorable results. Hawkinson and Rothmann have observed improvement during treatment with pituitary-like gonadotropic principle of pregnancy urine, and Kalk [6] describes a case in which the symptoms subsided during treatment with adrenal cortex extract.

PITUITARY ASTHENIA: PROBABLE PATHOGENESIS AND THERAPY

I [1] agree with von Bergmann's conception but at the same time emphasize the resemblance between the syndrome under discussion and hypothyroid conditions, with which, in all essentials, it seems to agree, except that myxedema is lacking. After one of my cases (case 2 in table) was considered by Josefson [7] as a psychogenic anorexia and was treated with thyroid substance, which resulted in a rapid return to complete health, I used the same treatment in my two other cases. The one improved distinctly, the other recovered completely with a weight increase of 11 Kg. in seven months and finally also a reestablishment of normal menses. The similarity to hypothyroidism and the effect of thyroid medication could be considered as indicating the decisive rôle played by the insufficiency of the thyrotropic function of the anterior pituitary in this primarily hypophyseogenic syndrome. The supply of thyroid substance would break a vicious circle by giving the adenohypophysis a chance to recover and take up again its exhausted function. Analogously, the effects of other organ preparations could be understood, such as those previously mentioned of estrogenic substance, adrenal cortex, and pituitary-like gonadotropic principle of pregnancy urine. If this theory is correct, it explains the mention in the literature on this subject of certain cases reacting better to one and others to another of the endocrine principles mentioned; the choice of preparation should depend on which of the partial functions of the anterior pituitary is most affected.

As a contrast to my cases, in which hypothyroidism and emaciation were dominating symptoms and, seemingly, a tendency to acromicria was present, I called attention to cases of thyrotoxicosis presenting a tendency to adiposity and acromegaloid symptoms. In the former case hypophyseogenic emaciation is quite apparent; in the latter there is perhaps a distinct hypophyseogenic thyrotoxicosis, each in the main conditioned by change in the "incretion" of the thyrotropic hormone from the adenohypophysis, with deficiency in the former, and hypersecretion in the latter case. This theory seemed to be supported by the fact that two of my cases at first apparently reacted to thyroid medication with slight symptoms resembling thyrotoxicosis, before the favorable effect clearly showed.

REPORT OF CASE

During the progress of this work I had under observation a case which behaved in every respect quite the opposite to the condition described: a young girl in

1. Wahlberg, Johannes: Acta med. Scandinav. 84:530, 1935; Finska läk.-sällsk. handl. 76:1059 (Dec.) 1934.
2. von Bergmann, G.: Deutsche med. Wchnschr. 60:123 (Jan. 26) 1934.
3. Rothmann, H.: Acta med. Scandinav. 87:168, 1935.
4. Hawkinson, J. F.: Simmonds' Disease (Pituitary Cachexia), J. A. M. A. 105:20 (July 6) 1935.
5. Simmonds, Morris: Deutsche med. Wchnschr. 40:322, 1914; 42:190, 1916; 44:852, 1918.
6. Kalk, H.: Deutsche med. Wchnschr. 60:893 (June 15) 1934.
7. Josefson, A.: Nord. med. tidskr. 5:489 (April 22) 1933.

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whom thyrotoxicosis and a tendency to adiposity seemed to develop simultaneously, while apparently a thickening of the finger tips had occurred at the same time. Since then the correctness of this line of thought seems to be confirmed by the development in the patient of pituitary asthenia leading to a loss of 29 Kg., which rapidly improved during thyroid medication, with an increase of 9 Kg. in one month.

A girl, aged 18 years, who had been treated with iodine for a slight goiter, showed in the spring of 1933 fatigue, tremor, sweating and tachycardia simultaneously with increase of weight. A certain puffiness round the eyes had been noticed and the finger tips seemed to have become broader than before. When examined objectively in October 1933 she showed a thyroid gland of ordinary size with a lump as large as a bean in the lower pole of the right lobe, moderate tremor, a heart rate of 120 per minute and a blood pressure of 160-140 systolic, 90 diastolic. Her weight was 80 Kg. net and her height 166 cm. The basal metabolism (Krogh) was + 11 per cent calculated according to her real weight and + 24 per cent according to her calculated normal weight, which was 63 Kg. She was treated in a purely conservative way with rest, diet and light sedatives. During this treatment her condition gradually improved; at home her pulse was often only about 70 per minute, but it would still rise, when examined by the physician, to 120 per minute, and the weight continually increased, attaining its maximum, 86 Kg., in December 1933.

*Clinical Manifestations in Four Cases**

Patient	Age	Loss of Appetite	Constipation	Amenorrhea	Height, Cm.	Weight, Kg.	Calculated Normal Weight, Kg.	Temperature (Axillary) C.	Temperature (Axillary) F.	Pulse Frequency	Blood Pressure	Basal Metabolism, per Cent
1.....	18	+	+	+	160	38	64	36	96.8	45	70/50	−19
2.....	12	+	+	0	174	38	52	35	95.0	48	80/60	−27
3.....	18	+	+	+	161	39	59	36	96.8	60	100/60	−27
4a.....	18	—	—	—	166	86	63	37	98.6	120	160/90	+24
4b.....	20	+	+	+	166	57	63	36	96.8	52	100/70	−25

* Cases 1, 2 and 3 are those previously reported by the author; case 4 is the one here described, 4a being the stage of thyrotoxicosis and adiposity at its height in the autumn of 1933 and 4b the stage of pituitary asthenia at its height in the autumn of 1935. The normal weight is calculated from tables made on the basis of the material obtained from the life insurance companies in Finland.

From the beginning of 1934 the symptoms of thyrotoxicosis declined and simultaneously the weight decreased. In January the basal metabolism was + 5 per cent. Calculated according to the normal weight it was + 19 per cent. She had lost 1 Kg. In March she was free from symptoms, except for a labile pulse and a certain tendency to sweating; the weight had fallen to 81 Kg. The patient began to complain of increasing gastric dyspepsia, which became worse, in spite of the expulsion of an intestinal worm (Diphyllobothrium) and the prescription of a diet. In May 1934 excessive dysmenorrhea occurred. The basal metabolism was then + 5 (+ 15) per cent and the weight 80 Kg. During the summer the last symptoms of thyrotoxicosis disappeared, but the dyspepsia became worse and was accompanied with growing loss of appetite and constipation. The weight continually went down and when, in January 1935, it had fallen to 65 Kg., a high caloric diet and rest were tried. In February the basal metabolism was ∓ 0 per cent and the weight 64 Kg. In June amenorrhea occurred too and the loss of appetite as well as the constipation became extreme. During July and the beginning of August the patient was in a sanatorium for a slight polyarthritis, and there it was noted that her pulse was often only about 50 per minute and the axillary temperature was below 36 C. (96.8 F.). In contrast to the previous year, she was always cold. An attempt with estrogenic therapy by mouth had no effect. At the end of August 1935 the basal metabolism was — 25 per cent, the rest pulse 58 per minute, the temperature 36.1 C. (96.9 F.), the blood pressure 100 systolic and 70 diastolic, and the net weight had reached a minimum of 57 Kg. Roentgen examination now, as during the period of adiposity and thyrotoxicosis, showed a sella turcica of usual appearance.

Pituitary asthenia, which already in the spring of 1935 was thought possible, was now considered certain, and thyroid medication was started during clinical observation. The first week the patient took thyroid tablets (Burroughs-Wellcome) 0.1 Gm. and then 0.2 Gm. daily. In ten days all symptoms had improved considerably and the weight had increased by 1 Kg. After one month's treatment with the same daily dose of thyroid the symptoms disappeared completely: the appetite was good, there was no constipation and the menses were normal, the feeling of chilliness had gone, the pulse frequency was 75 per minute, the blood pressure was 130 systolic and 90 diastolic, and the weight was 66 Kg., an increase of 9 Kg. in one month. Only a slight palpitation in the evenings was noticed in the beginning of the thyroid treatment. Slight symptoms in the joints and a chronic tonsillitis were still present, and since the beginning of the polyarthritis the sedimentation rate of the red corpuscles was slightly increased. The thyroid dose was cut down to half, and after a total duration of six weeks the medication was stopped. The weight of the patient was then 67 Kg. and, the joint symptoms excepted, she presented a picture of perfect health. The broad, seemingly acromegaloid, finger tips have not altered.

COMMENT

It seems as if this case could with some reason be considered to support the theory here put forward of pituitary asthenia, its pathogenesis, symptomatology and therapy. Two completely contrasting syndromes are here found in succession in the same person: first thyrotoxicosis accompanied by pathologic fatness and then symptoms of hypothyroidism accompanied by pathologic emaciation. An analogy may be found in the well known fact that a thyrotoxicosis, by excessive hyperactivity, may lead to a functional exhaustion of the thyroid gland and to myxedema. Everything points to this in my case, being in the first place a question of disturbance in the endocrine activity of the anterior pituitary, first excessive and then defective function. In both stages the disturbance in the thyrotropic part of its function appears to be dominant. Next comes the disturbance in the fat metabolism. It seems as if this in a peculiar way compensates for the disturbance in the basal metabolism, so that an increased basal metabolism is accompanied by adiposity, and a lowered basal metabolism by emaciation. The fact that these contrasting changes in the function of the anterior pituitary are followed by complete balance in its endocrine activity with clinical health seems to show that a grave anatomic lesion in the adenohypophysis cannot here, as in pituitary cachexia (Simmonds), be the cause of the functional disturbance in this organ. The clinical appearance of the thyroid gland and the roentgenologic aspect of the base of the skull also remain normal, while the clinical picture varies in this remarkable way.

As regards therapy with thyroid substance in pituitary asthenia, in the case reported here during one month of this treatment with quite small doses a continued loss of weight, as much as 29 Kg. in about a year and a half, and associated alarming symptoms were arrested and followed by a weight increase of 9 Kg. and restored health.

SUMMARY

1. The case reported presents two syndromes: first adiposity and then emaciation. The main symptoms of the syndrome discussed are severe loss of weight and of appetite, constipation, amenorrhea, hypothermia, bradycardia, arterial hypotonia, hypometabolism, and disturbances of the sugar metabolism. Less constant

symptoms are epigastric discomfort and increased sedimentation rate of the red blood corpuscles (von Bergmann), falling of hair (Hawkinson), reversible phlebosclerosis, and an apparent tendency to acromicria (Wahlberg). The syndrome is qualitatively almost exactly like Simmonds' pituitary cachexia but is in every detail slighter and reversible, and there are no signs of an organic lesion of the hypophysis.

2. The theory put forward earlier, that the syndrome may be conditioned by a functional deficiency of the anterior pituitary, is supported and at the same time it is pointed out that it seems as if the thyrotropic part of the adenohypophysis function plays an important part in the pathogenesis. In support of this theory it is stated that the syndrome resembles hypothyroidism in detail, except for the absence of myxedema, and that, at least in certain cases, medication with thyroid preparations has an extraordinary effect: three of my four patients recovered rapidly and completely during thyroid medication.

3. The case here presented first showed a thyrotoxicosis accompanied with adiposity, and then changed directly to the type of emaciation discussed with prompt recovery during thyroid medication. These two clinical pictures are presented as complete contrasts: probably hypophyseogenic thyrotoxicosis with adiposity and hypophyseogenic hypothyroidism with loss of weight. Very likely the first is due to hyperfunction, the latter to insufficiency of the anterior pituitary and chiefly of the thyrotropic part of its endocrine function.

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EFFECT OF ALCOHOL ON DIGESTION BY GASTRIC JUICE, TRYPSIN AND PANCREATIN

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In a previous study [1] it was found that gastric juice, trypsin and pancreatin digested insulin and that the digestion of insulin was prevented when alcohol of proper concentration and amount was added to this drug or to these enzymes. Apparently this effect was produced by the destruction of these enzymes with alcohol. It seemed that this knowledge might be of significance in interpreting the etiology of the polyneuritis or deficiency disease so often encountered in chronic alcoholic patients. Shattuck [2] suggested that alcoholic polyneuritis was caused chiefly by the failure to take or assimilate food containing a sufficient quantity of vitamin B. Such a view was held by Meyer,[3] Wechsler,[4] and Jolliffe and Joffe.[5] Similar ideas were expressed by Spies and DeWolf,[6] who felt that the development of pellagra in chronic alcoholism was due to loss of appetite and the substitution of drink for food, and by Strauss,[7] who concluded that alcoholic polyneuritis was probably the result of dietary deficiency, possibly conditioned by disturbed gastro-intestinal function.

Since it has been suggested that there was a deficient assimilation of food or a disturbed gastro-intestinal function in alcoholic polyneuritis it appeared of value to study this problem by determining the effect of alcohol on digestion by gastric juice, trypsin and pancreatin. This paper presents some observations on this subject.

PROCEDURE

The method of investigation was as follows: Specimens of gastric juice were obtained from a variety of nonalcoholic patients and the amount of free hydrochloric acid was determined. Each specimen was divided into two equal parts of about 10 cc. Pieces of egg albumin, which were coagulated by heating, were added to one part of gastric juice to serve as a control test. Then 10 cc. of 48 per cent alcohol and egg albumin were added to the second part. These were incubated at 37 C. and the amount of digestion was noted in six, twenty-four and forty-eight hours.

Similar tests were made with commercial powdered trypsin and pancreatin. About 0.5 Gm. of these substances was mixed with 20 cc. of water and divided into equal portions. Then pieces of egg albumin and alcohol were added as in the experiments with gastric juice and the results were noted.

RESULTS

The results obtained in these experiments were very interesting. In the control tests with the different specimens of gastric juice there was a varying amount of digestion of the egg albumin at the end of six, twenty-four and forty-eight hours and it increased as time went on. The digestion was most marked in those specimens of gastric juice in which the free hydrochloric acid was as high as 80 and least when the free hydrochloric acid was 0. However, in the tests with alcohol the results were quite different. Here there was practically no digestion of the egg albumin even at the end of forty-eight hours. The tests were repeated by incubating alcohol and gastric juice for fifteen minutes. The alcohol in this mixture was evaporated off in vacuo at 37 C. Then egg albumin was added to the remaining gastric juice and the amount of digestion was noted. In these tests also there was no digestion of the albumin. The results suggested that alcohol destroyed the enzymes in the gastric juice.

In the experiments with trypsin the results were more striking than those obtained with gastric juice. After the egg albumin was added to the trypsin mixture there was usually marked digestion within six hours and practically complete digestion in twenty-four hours. In contrast, when alcohol was added to the trypsin there was almost no digestion even at the end of forty-eight hours.

The results with pancreatin were similar to those obtained with trypsin, although pancreatin did not produce as much digestion as trypsin. However, when alcohol was added to the pancreatin there was no digestion of albumin during the period of observation.

PROTEOLYTIC ACTION OF GASTRIC JUICE OF ALCOHOLIC PATIENTS

As a result of the previous experiments, it was reasonable to conclude that alcohol inhibited the proteolytic activity of certain digestive enzymes in vitro. It

From the Medical Clinic of the Peter Bent Brigham Hospital.

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6. Spies, T. D., and DeWolf, H. F.: Observations on the Etiological Relationship of Severe Alcoholism to Pellagra, Am. J. M. Sc. 186: 521 (Oct.) 1933.

7. Strauss, M. B.: The Etiology of Alcoholic Polyneuritis, Am. J. M. Sc. 189: 378 (March) 1935.

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then appeared of interest to determine whether or not this was true in alcoholic patients. To study this phase of the problem, a group of eight alcoholic individuals[8] who drank about 1 or 2 pints of whisky a day for a period of about ten days was selected. Specimens of gastric juice were aspirated two or three days after the patients were over their alcoholic bout and the proteolytic effect was determined. There was no free hydrochloric acid present in any of the samples of gastric juice.

The results obtained were of considerable interest. In these cases digestion did not take place as it did with the gastric juice of the nonalcoholic patients. Instead, no digestion occurred. It appeared that the proteolytic activity of gastric juice was inhibited.

Since the gastric juice from these alcoholic patients was found to be devoid of free hydrochloric acid, it seemed well to investigate its significance in relation to digestion. To determine this, hydrochloric acid was added to specimens of gastric juice aspirated from two of these individuals to make the free hydrochloric acid 40 and finally gastric juice with a free hydrochloric acid of 35 was obtained from an individual who drank a considerable amount of liquor for two or three days. Egg albumin was added to these specimens and incubated. The amount of digestion was noted for a period of forty-eight hours. In these experiments, too, no digestion was noted during the test period. Apparently, the absence of free hydrochloric acid in itself was not an important factor in inhibiting the proteolytic action of the gastric juice obtained from these alcoholic patients.

COMMENT

It is apparent from the results obtained in these experiments that a sufficient amount of alcohol inhibits the proteolytic activity of certain gastro-intestinal enzymes. In considering the chronic alcoholic patient with polyneuritis or deficiency disease, it would appear that the large quantities of liquor taken over a long period of time destroys digestive enzymes and thus prevents the proper digestion and assimilation of food. Consequently, a deficiency disease is produced. This idea fits in with the views already expressed by various authors. However, this study, perhaps, gives more direct evidence in this matter.

CONCLUSION

A proper amount of alcohol destroys the proteolytic activity of certain gastro-intestinal enzymes in vitro and in vivo.

It is suggested that alcoholic polyneuritis or deficiency disease may be caused, in part at least, by faulty digestion and assimilation of food resulting from the destruction of digestive enzymes by large quantities of alcohol taken over a considerable period of time.

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8. I am indebted to Dr. John A. Foley of the Boston City Hospital for the use of these patients.

Candy and the Child's Diet.—In general, the proper place of sugar in the food supplies and eating habits of children is not in such concentrated forms as candy, nor in the indiscriminate and excessive sweetening of all kinds of food, but rather as a preservative and mild flavor to facilitate the introduction into the child's dietary of liberal amounts of fruit and milk. For many reasons it is desirable that the dietary contain about a quart of milk per day, at least as long as growth continues. —Sherman, H. C.: Food and Health, New York, Macmillan Company, 1934.

ELECTRO-URETHROTOMY IN THE TREATMENT OF URETHRAL STRICTURES

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Present day teaching regarding the proper management of urethral strictures may be summed up in a few words: Dilate the stricture whenever it is possible to do so; otherwise cut it. Between these two extremes the average physician has chosen a rather benign course of therapy, which will give to his stricture patient the greatest benefit and best result. For routine dilation, hard rubber bougies and steel sounds have given relief to many patients for a good many years. For urethrotomies, the Maisonneuve knife and the Otis instruments are only too well known to most urologists.

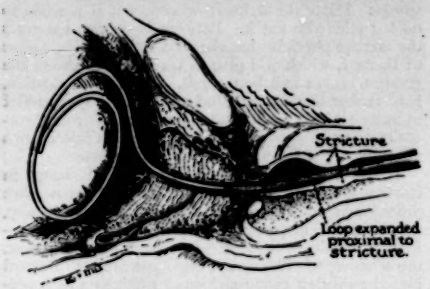
The fact that there has been no radical change in instruments and technic during the past twenty-five years or more speaks well for present day therapy, which in the majority of instances has given satisfactory results. Because of conservatism, however, one wonders whether or not urologists are apt to crowd into the dilation group strictured urethras which perhaps primarily should be treated surgically. I am sure there is a small group of patients who submit to dilation treatment only out of sheer necessity in order to obtain relief from their severe, distressing symptoms. Again, urologists hesitate to advise surgery or to operate on some of these obstinate strictures because from experience they have learned that adequate satisfactory results are not always obtained. The importance of urethral strictures is seriously brought to our attention when we are dealing with such complications as superficial urinary extravasation. In large hospitals, where many of these patients are seen and cared for, the surgical mortality is still reported to be approximately 50 per cent.

It is still recognized that there are certain types of strictures which should in most instances be treated surgically. Among these may be mentioned (1) traumatic or fibrotic strictures, (2) congenital strictures, (3) resilient strictures, (4) strictures of the penoscrotal angle and (5) strictures in patients who develop chills and fever following instrumentation. There is another small group of patients who do not always fit well into the scheme of progressive dilation and are at times better managed surgically. Occasionally an individual is seen who does not have time to undergo a long course of urethral dilation. Elderly patients with poor health may not tolerate well the shock of repeated sounding. Many Negro patients abhor the sight of a sound and will not submit to regular dilation treatments. Occasionally fibrotic strictures develop in the anterior urethra following transurethral operations, and the dilation management of these strictures may be very troublesome. In the female, undilatable strictures are encountered which may lend themselves very readily to surgical intervention.

For some reason or other, it is not always possible to treat these patients surgically. Hospitalization for a

Read before the Chicago Urological Society, Jan. 23, 1936.
This instrument is manufactured by I. Greenwald, Inc., Gary, Ind.
From the Department of Urology, Northwestern University Medical School, and Passavant Memorial Hospital.
The author is indebted to Drs. Sanner, Christensen and Hibbs of the Urological Department, Northwestern Medical School, for their help and cooperation in this work.

few days to a few weeks or more becomes necessary. On the other hand, when a patient is hospitalized and operated on with the Maisonneuve or Otis instrument, complications such as hemorrhage and sepsis are not uncommon and even death may occur. While urethrotomy is a rather simple operation, its present disfavor may be the result of too many complications and poor results. Admitting that surgical strictures still exist, any operation which will lower the present



Method of inserting electro-urethrotome.

morbidity and mortality and give better results should become the procedure of choice.

During the past three years at the Northwestern University Urological Clinic we have resorted to a new method of treating urethral strictures. I am not aware that this method has been reported previously. Livermore [1] in 1930 suggested the use of a fulgurating current for the softening of urethral strictures through a urethroscope. Sarmiento [2] of Mexico City recently reported cases of urethral strictures treated with bipolar-diathermy coagulation. Although he reports 95 per cent good results, it would seem difficult to control the depth of the coagulation in all cases in which this type of current is used.

With the recent popularity of the cutting current, it occurred to me that this type of current might be utilized in the cutting of urethral strictures. The preliminary report of this work has already appeared.[3] A sufficient number of patients have been operated on and followed to allow further comment on this work. As will be noted, we have treated some small caliber strictures by urethrotomy which might have been dilated with sounds just as easily. In order to evaluate this procedure rapidly and compare notes with the usual dilation treatments, all tight strictures were first sectioned and subsequently dilated.

For the division of urethral strictures we have developed a No. 12 F., semiflexible, insulated electro-urethrotome equipped with an expansible cutting loop. I have elected to call this operation an electro-urethrotomy. A standard filiform bougie should be attached to act as a guide. After the urethrotome has been inserted, the loop may be expanded to the desired caliber just proximal to the deepest stricture, as shown in the diagram. Contact is then made with a foot-switch and the instrument withdrawn. The current may be discontinued any time during the withdrawal. All cutting is done at 12 o'clock along the surgical urethral roof and distal to the cut-off muscle. There is no shock and very little active bleeding. One per cent cocaine urethral anesthesia has been used as a routine in all but one case. Patients who have urine in the bladder are able to void immediately after the urethrotomy. An indwelling catheter is unnecessary. In a tight, deep stricture of the bulb, difficulty may be encountered in passing the urethrotome. Should this happen, the stricture may first be dilated with a small sound or bougie, and cut later. Traction on the urethra with pressure on the suspensory ligament may straighten the canal sufficiently to allow the instrument to pass.

A summary of the first fifty stricture patients on whom an electro-urethrotomy was performed is presented here. Forty-three of the patients were operated on in the dispensary, six in the Passavant Memorial Hospital, and in one case surgery was precluded because of high grade morphine addiction. The patient was taking between 5 and 8 grains (0.3-0.5 Gm.) daily, and we felt that this was a contraindication to this or any other operation.

These strictures were classified as in table 1. The majority of the single strictures were located in the bulb. All patients but eight gave a history of a previous urethral infection. Twenty-one, or 42 per cent, had a history of stricture treatments. Eight, or 16 per cent, gave a history of one or more stricture operations.

The associated pathologic condition was in forty-eight instances a coexisting prostatovesiculitis of various grades. In fifteen patients out of forty, 38 per cent, of whom the blood pressure was recorded, a hypertension was present. Seven patients, 14.26 per cent, also showed evidence of vesical neck obstruction. Six of these were contractures and inflammatory bars, while one was a middle lobe prostatic hypertrophy so diagnosed elsewhere at operation. Six patients, or 12 per cent, had signs of single or multiple arthritis. Four had an acute urinary retention from twelve to forty-eight hours before operation. Only three, or

TABLE 1.—*Classification of Strictures*

Single	29	Filiform	24
Multiple	21	Traumatic	4
Small caliber (below 20 F.)	48	Undilatable and resilient	7
Large caliber (above 20 F.)	2		

TABLE 2.—*Associated Pathologic Conditions*

	No. of Cases	Percentage
Chronic prostatovesiculitis	48	97.9
Hypertension (blood pressure not known in ten)	15	38.46
Vesical neck obstruction (one adenoma)	7	14.26
Arthritis	6	12.22
Acute retention	4	8.16
Diverticula of the bladder	3	6.12
Positive Wassermann reaction	3	6.12
Gonorrhea	2	4.08
Varicocele	2	4.08
Renal insufficiency	2	4.08
Bilateral epididymitis	1	2.04
Solitary ulcer	1	2.04
Reduplication (infection of lower half)	1	2.04
Carcinoma of bladder	1	2.04
Generalized carcinomatosis	1	2.04
Pulmonary tuberculosis	1	2.04

1. Livermore, G. R.: South. M. J. **23**: 849 (Sept.) 1930.
2. Sarmiento, S. Aguilar: Diathermocoagulation in Filiform Strictures of the Urethra, Salubridad **2**: 46-53 (Jan.-March) 1932.
3. Riba, L. W., and Sanner, J. F.: Treatment of Urethral Strictures of Small Caliber by a New Method, J. urol. **30**: 361 (Sept.) 1933.

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6 per cent, had a positive Wassermann reaction. This percentage seems low and is quite at variance with the publication of Ross [4] in 1927. In a series of fifty cases of stricture, he found a positive Wassermann reaction in thirty-three, or 66 per cent. Two patients had gonorrhea. One of these had increasing difficulty in urinating after a six months protracted gonorrheal urethritis. A urethrotomy, followed by a few urethral sounds, cleared up the difficulty in urinating and the urethral infection. The other patient was treated by urethrotomy and three weeks later developed a urethral discharge that contained gonococci. We have listed this case as an acute exacerbation, although a reinfection was a possibility. Marked renal insufficiency was noted in two cases. Bilateral epididymitis, solitary ulcer of the bladder, double kidney and ureter, carcinoma of the bladder, generalized carcinomatosis and advanced pulmonary tuberculosis were noted once each.

TABLE 3.—*Immediate Results of Treated Urethral Strictures*

	Dilation Treatment (45 Cases)	Electro-Urethrotomy (49 Cases)
Average caliber before	15.31 F.	10.8 F.
Average caliber after	25.91 F.	23.5 F.
Average number of dilations	12.0	0.0
Average number of sections	0.0	1.04
Average time	3½ mos.	3½ wks.

TABLE 4.—*Follow-Up Notes on Stricture Cases in Which Treatment Was Given*

	Dilation Treatment (164 Cases)		Electro-Urethrotomy (49 Cases)	
	Number	Per Cent	Number	Per Cent
Returned	123	75	46	94
Failed to return	41	25	3	6
Improved	97	59.14	46	94
Unimproved	22	13.42	2	4
Made worse	2	1.22	0	0
Result unknown	2	1.22	1	2

It has been interesting to compare the immediate results of cases in which electro-urethrotomy was done with those treated by progressive dilation. From the records of the Northwestern University Clinic it was noted that it took an average of twelve treatments over a period of three and one-half months to perform dilation in forty-five cases from 15.31 F. to 25.91 F. In the present series we have been able to increase the average caliber in forty-nine cases from 10.8 F. to 23.5 F. with approximately one section treatment (two patients were reoperated on because the deepest stricture was missed the first time). Also from the records of the clinic, in 164 cases in which the diagnosis of urethral stricture was definitely recorded, forty-one patients, or 25 per cent, failed to return for treatments; ninety-seven, or 60 per cent, noted satisfactory improvement from their treatments, while twenty-two, or 13.5 per cent, stated that they were unimproved. Two patients stated that they were made worse and in two other cases the results were not clear.

In the present series of forty-nine cases in which operation was performed, forty-six, or 94 per cent, of the patients returned for at least one follow-up treatment. Of the three patients who did not return, follow-up reports were obtained for two. One clinic patient informed the social worker after six months had elapsed that he was entirely well. This was the patient who had bilateral epididymitis and a marked pyuria. I demonstrated the case to the students as probable genito-urinary tuberculosis. Calibration was not done before cystoscopy and the stricture was discovered while an attempt was being made to introduce the cystoscope. The other patient was from out of town and he went elsewhere for his follow-up examination one month after the urethrotomy. This patient is one of the two listed in the unimproved column. Cystoscopy elsewhere revealed an inoperable carcinoma of the bladder. The other patient who was unimproved was later operated on with an excellent final result. The result in one patient who did not return is unknown.

The operative and postoperative complications have not been troublesome. Eight patients had some immediate postoperative bleeding, while three had mild secondary hemorrhages on the first, third and sixth days. None of these hemorrhages were severe. In two cases the loss of blood amounted to above 2 ounces (60 cc.) each. In two cases considerable hemorrhage was produced by the passage of the instrument. Postoperative frequency and burning lasting from a few hours to seven days were noted by thirteen patients. Two patients had partial temporary urinary incontinence, in one noticeable for four days and in the other for ten days. One patient developed a mild epididymitis, while another developed an acute prostatovesiculitis after three weeks, at which time the smear was positive for gonococci. A paraphimosis was seen once on the fourth postoperative day; it was easily reduced. In four of the earlier cases some mechanical difficulties were experienced, such as the breaking or collapsing of loops.

It is noted that, of forty-nine patients who were operated on, only thirty returned for follow-up sounds.

TABLE 5.—*Operative and Postoperative Complications of Electro-Urethrotomy*

Hemorrhage	
Immediately after operation	8
Secondary	3
Due to insertion of the instrument	2
Frequency and burning	13
Instrument and current difficulty	4
Temporary incontinence	2
Epididymitis	1
Acute prostatitis	1
Paraphimosis	1

TABLE 6.—*Six Months' Results in Thirty Cases (Electro-Urethrotomy)*

Average caliber before treatment	10.8 F.
Average caliber after six months	26.5 F.
Average number of urethrotomies	1.04
Average number of postoperative dilations	4.2

At the end of six months the average caliber in these thirty cases was 26.5 F. The average number of postoperative sounds per patient was 4.2. Comparing these results with the average results of dilation, it was found that the number of treatments necessary to open a tightly strictured urethra had been reduced by 66 per cent. Only one of the earlier patients who was operated on has returned within the last year with a recurrence. I am sure there must be others who perhaps have gone

4. Ross, A. O.: Brit. M. J. 2:266 (Aug. 13) 1927.

elsewhere. Twenty-six patients were recently asked to return for observation, but to date (January 1936) only four have come in. In these four cases the urethras were wide open after one, one and one-half, two and two and one-half years. All patients who are coming in for infrequent follow-up sounds have shown no unusual tendency to recontract.

REPORT OF CASES

A few case reports are submitted illustrating the type of strictures in which electro-urethrotomy has given excellent results:

Case 1.—L. T., a Negress, aged 55 years, came to the clinic for the first time Oct. 25, 1927, complaining of pain and difficulty on urination. She did not return for treatments and for seven years had irregular dilations elsewhere. Sept. 16, 1935, she returned to the clinic with the same complaints plus dribbling, frequency and nocturia. The Wassermann reaction was negative but the Kahn test was three plus positive. A filiform stricture in the distal urethra, a papilloma of the external meatus and pus in the urine were found on examination. A few days later a 12 F. sound was passed with slight difficulty. October 3 an electro-urethrotomy was performed under 1 per cent cocaine anesthesia. The stricture was cut to a 25 F. Ten days later she returned with marked improvement of her symptoms. Cystoscopy was performed October 23 and a 24 F. cystoscope was easily passed. A cystic urethritis was noted, which was lightly fulgurated. Six weeks after the urethrotomy a Kollmann dilation to 30 F. was easily carried out. Dec. 9, 1935, she stated that there were no bladder symptoms, nocturia, difficulty or frequency. There was no residual urine. Sections of the tumor removed from the meatus the day on which cystoscopy was done showed a benign papilloma. This is a case of undilatable fibrotic stricture in the female which reacted well to surgical division.

Case 2.—W. R., a man, aged 54, came to the clinic June 13, 1935, because of an acute conjunctivitis. The Wassermann reaction was four plus positive. He was treated in the Department of Dermatology and referred to the Department of Urology September 19 because albumin and pus had been noted in the urine. He stated that he had no urinary symptoms. Examination, however, revealed a pyuria, chronic prostatovesiculitis (grade 2) and a filiform stricture of the bulb. A 10 F. Le Fort sound was passed September 23. On arriving home he had a severe chill and was in bed for one week. He was removed to a hospital on account of sepsis, where he remained for sixteen days more. October 24 he returned to the clinic. His condition was about the same as on the previous examination. The urine was dirty and ammoniacal. The stricture was now size 13 F. An electro-urethrotomy was performed and the stricture was divided to 27 F. He returned in one week stating that he was definitely improved. November 14 a 24 F. diagnostic bougie was passed into the bladder without difficulty. A No. 25 Van Buren sound was passed easily, December 20. Jan. 10, 1936, a 26 F. Benique was easily passed into the bladder. Residual urine of 2 ounces (60 cc.) was present. A vesical neck obstruction is probable, and cystoscopy will be done. The patient is very happy over the result.

Case 3.—J. H., a man, aged 54, entered the clinic Feb. 25, 1935, complaining of difficulty in urinating, fever and swelling of the scrotum. He had been operated on for strictures in 1900 and 1932. Examination revealed a typical superficial urinary extravasation with sugar and acetone in the urine. The Wassermann reaction was negative. He was operated on the same day, and an internal and external urethrotomy was performed with a Maisonneuve knife. A large, deep perineal abscess also was found. The anterior strictures were cut to a 26 F. He returned to the clinic March 26 and a 12 F. Le Fort sound was passed with slight difficulty. He was subjected to weekly dilations and on June 18 the urethra was open to a 21 F. Sounds were passed with some difficulty and the perineal fistula was intermittently open. He was not seen again until November 4. At this time he stated that there had been a recent recurrent swelling in the perineum, which had ruptured. Examination revealed an indurated scrotal and perineal fistula. The urethra was tightly strictured. An electro-urethrotomy was performed November 7 and the strictures were divided to a 27.5 F. He returned six days later and the fistula had closed. Three weeks after the electro-urethrotomy a No. 25 Van Buren sound was easily passed and the fistula was still closed. December 4 he stated that he felt better and urinated with less discomfort than he had for many years.

Case 4.—E. C., a Negro, aged 62, was referred to the clinic by Dr. Robert Graham, Nov. 2, 1934, because of rapid recontraction of the urethral strictures following sounds. He had been troubled with strictures for twenty years. On examination multiple small caliber strictures, a prostatovesiculitis and pus in the urine were noted. The Wassermann reaction was negative. An electro-urethrotomy was performed December 6, and the strictures were divided to a 27 F. Jan. 25, 1935, roughness was noted in the bulb with a 20 F. diagnostic bougie. The deep stricture only was recut to a 28 F. April 2, 1935, the urethra was open to a 24 F. sound. Dilation was repeated at irregular intervals and on October 17 the urethra was open to a 31 F. sound. This was a resilient stricture, which yielded readily to electrosurgical division. The deepest stricture was not cut well the first time and was adequately redivided the second time. The patient is quite happy about the final result.

Case 5.—W. W., a man, aged 40, seen in the Passavant Memorial Hospital Oct. 5, 1934, complained of chills and fever, difficulty in urinating, backache, and swelling of the knees and ankles. He was treated for urethral strictures two years before. Examination disclosed a pyuria, a prostatovesiculitis, multiple arthritis, and multiple strictures of the anterior urethra (bulb 12 F.). A flat film was negative for stones. The Wassermann reaction was negative. The following day the strictures were divided with the electro-urethrotome to 25 F. He left the hospital greatly improved on October 13. November 3, a 22 F. diagnostic bougie passed easily. The following week a No. 23 F. Van Buren sound was passed smugly. The urine now was clear and he had no symptoms. The patient did not return to the office until May 24, 1935, at which time he presented signs of an acute anterior gonorrheal urethritis. He was somewhat chagrined about the diagnosis and did not return for treatments. This was an unfavorable dilation case which reacted well to urethrotomy.

Case 6.—S. A., a Negro, aged 65, had been coming to the urologic clinic for five years because of frequency, nocturia and some difficulty in urinating. Repeated cystoscopic examinations revealed a contracture of the bladder neck with from 2 to 4 ounces (60-120 cc.) of clear residual urine. He was referred elsewhere for resection of the prostate and was operated on Dec. 26, 1934. Oct. 8, 1935, he returned complaining of recurring difficulty on urination. Calibration revealed eight distinct fibrotic strictures of the anterior urethra, size 16 F. An electro-urethrotomy was performed November 14 and the entire urethra divided to 27.5 F. Four weeks later a No. 24 F. Van Buren sound was easily passed; December 13 a 25 F. and December 27 a 26 F. Van Buren sound passed easily. These multiple fibrotic strictures following prostatic resection were very easily managed by an electro-urethrotomy and sounds.

Case 7.—H. G., a man, aged 26, was referred to the office in August 1934 with a history of an undilatable stricture of four years' duration. In a motorcycle accident in 1929 he sustained some injury to the penis. In 1930 a physician inserted a sound carrying two copper electrodes into the urethra. The current was switched on for five minutes, during which time he experienced severe pain. During the next four years he had many urethral dilations, and examination revealed a 2 inch fibrotic stricture of the penile urethra, size 14 F. Because of the history, an electro-urethrotomy was recommended and performed Aug. 19, 1934. Two attempts to cut the stricture were unsuccessful. He returned December 31 and another urethrotomy was tried. Again the loop failed to cut. He returned again March 17, 1935, stating that, while he believed in this operation, nevertheless he was afraid of it. He confessed that during the previous operations as soon as he felt the current he raised his buttocks off the body electrode and so disconnected the current. Another urethrotomy was performed at this time, with the plate placed over the abdomen

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secured with an abdominal binder. At this sitting the strictures were easily divided to 31 F. May 6, 1935, a No. 23 F. Van Buren sound passed without difficulty. In a recent communication he stated that he was being kept open to 26 F. and was symptom free. This is a case of an undilatable stricture which yielded to an electro-urethrotomy when adequately performed. The first two operations failed because the patient feared the use of electrical instruments in the urethra and deliberately chose to break the current during the operation.

CASE 8.—R. H., a medical student, aged 32, had sustained a straddle injury at the age of 8 years. During the following twelve years he had many sounds passed and three stricture operations. The perineal fistula persisted. In 1921 he was operated on by Dr. Dean Lewis with an excellent result. He was seen in the Passavant Hospital in February 1933 because of a pyuria following an influenzal infection. The urine was dirty and contained many shreds. He was again seen in the office April 10, 1933, at which time calibration of the urethra revealed a long fibrotic stricture in the bulb (13 F.). A prostatovesiculitis (grade 2) was present. The seminal fluid also contained Trichomonas in large numbers. He preferred an electro-urethrotomy to the usual sound treatments. April 22, 1933, in the clinic, the urethra was cut to 26 F. On the sixth postoperative day he had a slight secondary hemorrhage with some frequency of urination. One month later a 23 F. diagnostic bougie was easily passed into the bladder. June 2 a 24 F. and September 19 a 25 F. bougie were passed. He has reported for irregular urethral dilations at three or four month intervals and a No. 29 F. Van Buren sound can now be passed without difficulty. Because the patient had such brutal sound treatment when he was a boy, he felt that an electro-urethrotomy was the procedure of choice in his case.

COMMENT

This electro-urethrotome is not presented as a panacea for all urethral strictures. It has been found very useful in the fibrotic, resilient and undilatable types. The operation is not recommended to displace the use of urethral sounds or bougies. In large caliber strictures and urethral infiltrations, it undoubtedly has little value. In patients, however, who fall in the groups named, an electro-urethrotomy may fill a needed niche, particularly from the standpoint of the patient. For an individual who has a strictured urethra and who for some reason or other (renal colic, hematuria or injuries) needs an immediate cystoscopy, this method would seem more rational than the usual avulsion of the stricture, which is so frequently resorted to.

In our hands, this operative technic has seemed so much simpler than that of other urethrotomies now in general use that I feel it may replace some of them to a certain extent. I do not maintain that this instrument and the technic employed are necessarily entirely correct, but I do believe that the principle of using the cutting current marks a step of progress in the management of undilatable and surgical strictures. Even though the majority of these patients were operated on in the clinic, I do not choose to recommend this operation as an office procedure. I feel that in most instances this operation has a lower morbidity and mortality and necessitates fewer hospital days. Postoperative sounds should be passed as a routine procedure, preferably after three or four weeks. We have calibrated most patients after three weeks and passed a Van Buren sound on the fourth week. With a few exceptions, these sounds were very readily passed. There was no indication that more scar tissue was apt to form following this operation. In reality, there must be considerable absorption. In nearly every case in which the operation was properly performed, it has been possible to convert a small caliber stricture into one of large caliber with one electrosection treatment. We have not hesitated to repeat this operation a second time. Because we were dealing primarily with ambulatory patients we have elected to keep the caliber of the cut closer to a 25 F. than to a 30 F. No patient objected to the treatment and all were satisfied with the results obtained. We have no definite check on postoperative temperatures, though I am certain that some patients must have had fever reaction.

180 North Michigan Avenue.

EFFECT OF CAROTENE AND VITAMIN A ON PATIENTS WITH DIABETES MELLITUS

III. THE EFFECT OF THE DAILY ADMINISTRATION OF CAROTENE ON THE BLOOD CAROTENE OF NORMAL AND DIABETIC INDIVIDUALS

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In a previous study we,[1] reported the effect of single doses of carotene on the blood carotene of normal and diabetic persons to whom it had been orally administered. In those cases the blood carotene was followed daily for one week after the administration of carotene. In the present study we have observed the effect of the continued administration of carotene on the blood carotene and cholesterol of a group of four normal and four diabetic persons.

PROCEDURE

Following a preliminary period on a constant diet, during which the blood carotene and cholesterol were determined, three of the normal subjects and three of the diabetic patients were given orally 1 cc. of 0.3 per cent carotene in oil daily for a period of from two to four months (cases 13, 14, 15, 16, 17 and 18). The diets in this group of normal subjects were not identical to the diets of the diabetic patients but included vegetables twice a day with the exception of carrots. None in this group were hospitalized and, as it was difficult for them to come to the laboratory before breakfast, blood was withdrawn four hours after breakfast. The carotene was given with the evening meal, so that the blood carotene estimations were done approximately seventeen hours after the administration of carotene. Determinations were made at intervals of from one to two weeks.

The observations in case 19, normal, and case 20, diabetic, were done while the individuals were in the hospital. Their diets were in every way identical. The carotene was determined on fasting samples of blood. After the control period, two doses of 25 cc. of 0.3 per cent carotene were given at intervals of one week.

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1. Ralli, Elaine P.; Brandaleone, Harald, and Mandelbaum, T.: Studies on the Effect of the Administration of Carotene and Vitamin A in Patients with Diabetes Mellitus: I. The Effect of the Oral Administration of Carotene on the Blood Carotene and Cholesterol of Diabetic and Normal Individuals, J. Lab. & Clin. Med. 20:1266, 1935.

Following each administration, blood carotene determinations were done at intervals of five, twenty-four, forty-eight and ninety-six hours and one week. A week after the second administration of 25 cc. of carotene in the normal subject and two weeks after in the diabetic patient, daily administrations of 5 cc. were begun. These were continued for twenty days in the diabetic patient, when owing to an error none was given for four days. It was begun again in doses of 10 cc.

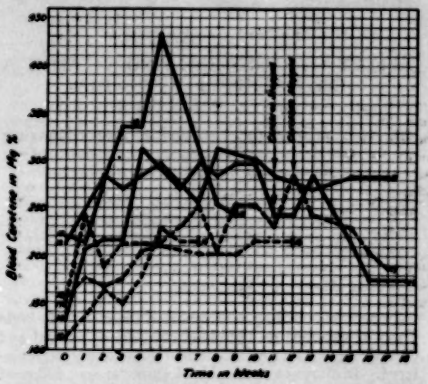

Chart 1.—Effect of the daily administration of 1 cc. of 0.3 per cent carotene in oil on the blood carotene of three normal subjects and three diabetic patients. Solid line, diabetic patients; broken line, normal subjects.

daily and continued for ten more days. The carotene was then discontinued and the blood carotene was followed for a period of ten days. The normal individual received 5 cc. daily for twenty-nine days and the blood carotene was estimated at weekly intervals for twenty-eight days after the administration was discontinued.

Carotene was determined on the serum by the method of White and Gordon [2] and cholesterol on the plasma by the Bloor colorimetric method.[3] Blood sugar determinations were made but are not reported, as they bore no relation to the blood carotene.

RESULTS

The status of the patients studied and the diets and insulin given the diabetic patients are summarized in table 1. The effects of the daily administration of 1 cc. of 0.3 per cent carotene in oil in cases 13, 14 and 15, diabetic, and cases 16, 17 and 18, normal, are shown graphically in chart 1. In the three normal subjects the blood carotene rose after one week. In cases 16 and 18 the rise was 0.022 mg.; in case 17 it was 0.095 mg. This was followed by a fall the second week in cases 17 and 18 and then by a progressive increase, reaching a peak in cases 16 and 18 on the thirty-fifth day and on the eighty-fourth day in case 17. In the diabetic patient the increase was progressive from the start, with the exception of a fall of 0.014 mg. in case 13 the third week. The peak was reached after twenty-eight days in case 14, thirty-five days in case 15 and fifty-six days in case 13. In two diabetic patients the absolute increase was greater than in the normal subjects, being 0.178 and 0.212 mg., while the greatest increase in the normal subjects was 0.136 mg. Case 15, normal, was followed for thirty-five days after the administration of carotene was stopped. The blood carotene fell progressively and on the thirty-fifth day was 0.189 mg. per hundred cubic centimeters. This was higher than prior to the administration of carotene. In the diabetic, cases 13 and 14 were followed for forty-two and forty-nine days respectively after carotene had been stopped. The blood carotene in case 13 had not returned to the original level forty-two days after carotene was discontinued. In case 14 there was a definite drop on the twenty-eighth day, and the blood carotene was still lower on the thirty-fifth day, but, although within the normal range at that time, was not as low as it had been prior to the administration of carotene. The fall in these two diabetic patients was slower than in the one normal subject followed.

In the normal and the diabetic receiving the larger daily doses of carotene a different set of conditions was established as a result of the previous administration of a total of 50 cc. of carotene. In table 2 we have reported the changes in blood carotene during each week following these large single doses. As these results are similar to those previously reported,[1] they require no further discussion. When only a week was allowed to elapse in the normal after the second administration of 25 cc. of carotene, the fasting blood carotene was still elevated and was only 0.013 mg. lower than that of the diabetic. This made it possible to observe the effects of the further administration of carotene in a normal subject whose blood carotene was as high as that of a diabetic patient. We have shown in a previous study [4] that the average fasting blood carotene in a group of diabetic patients was 0.262 mg. per hundred cubic centimeters and in a group of normal subjects was 0.109 mg.

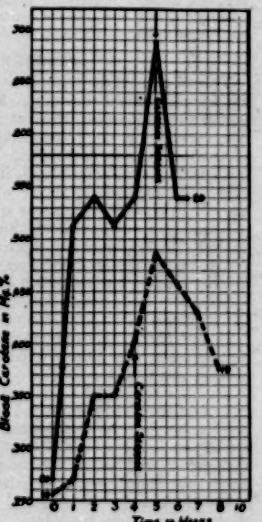

Chart 2.—Effect of the daily oral administration of 3 cc. of 0.3 per cent carotene in oil on the blood carotene of one normal subject and one diabetic patient. Solid line, diabetic patient; broken line, normal subject.

The effect of carotene in cases 19 and 20 is shown graphically in chart 2. In case 20, diabetic, the blood carotene rose after six days to 0.513 mg. per hundred cubic centimeters, while in the normal subject at this time it had risen only to 0.351 mg. The total rise at

2. White, F. D., and Gordon, E. H.: Estimation of Serum Carotene, J. Lab. & Clin. Med. 17: 53 (Oct.) 1931.

3. Bloor, W. R.; Pelkan, K. F., and Allen, D. M.: Determination of Fatty Acids (and Cholesterol) in Small Amounts of Blood Plasma, J. Biol. Chem. 52: 191 (May) 1922.

4. Brandaleone, Harold, and Ralli, Elaine, P.: Fasting Blood Carotene Level in Normal and Diabetic Individuals, Proc. Soc. Exper. Biol. & Med. 32: 200 (Oct.) 1934.

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this time was 0.243 mg. in the diabetic patient and 0.094 mg. in the normal subject. Even when the normal subject started with an increased carotene concentration in the blood, the rise was much less than in a diabetic patient. On the thirteenth day the blood carotene in the diabetic patient had risen to 0.540 mg. per hundred cubic centimeters and there was clinical evidence of carotenemia. The patient had at this time received 65 cc. of the carotene solution. The carotenemia was most marked in the palms of the hands. Later the skin of the face had a definite yellow tinge. The yellow pigmentation of the face and hands persisted until ten days after the administration of carotene was stopped, and during this time the blood carotene remained at 0.540 mg. per hundred cubic centimeters. By the nineteenth day the yellow coloration of the skin had disappeared. The greatest increase in blood carotene in the diabetic patient was reached after twenty-nine days of carotene administration, at which time the patient had received, in daily doses, a total of 190 cc. of 0.3 per cent carotene in oil.

TABLE 1.—*Averages of Fasting Blood Carotene and Cholesterol Prior to the Administration of Carotene, Diets and Insulin in Diabetic Patients*

Normal Subjects					Diabetic Patients								
			Average				Average		Diet in Gm.				
Case	Age	Sex	Carotene, Mg. per 100 Cc.	Cholesterol, Mg. per 100 Cc.	Case	Age	Sex	Carotene, Mg. per 100 Cc.	Cholesterol, Mg. per 100 Cc.	Carbohydrate	Protein	Fat	Insulin, Units Daily
16	22	♂	0.113	170	13	30	♀	0.212	214	300	70	85	30
17	28	♂	0.140	172	14	34	♂	0.131	199	250	75	85	35
18	22	♂	0.153	161	15	38	♂	0.229	218	300	65	85	40
Av.	24	♂	0.135	...	19	45	♂	0.220	204	200	75	85	45

* The diet in case 19 was identical to the diet in case 20.

The normal subject received a total of 145 cc. of the carotene solution in a period of twenty-nine days. At the time when he had had 65 cc. the blood carotene was 0.350 mg. per hundred cubic centimeters, which was 0.190 mg. lower than in the diabetic patient. The greatest increase in blood carotene in the normal subject occurred seven days after carotene administration had stopped. During the administration of carotene the highest level was 0.486 mg. per hundred cubic centimeters and was reached on the twenty-eighth day. The blood carotene was determined at weekly intervals for four weeks after carotene was discontinued. By the fourth week it had fallen to 0.378 mg. per hundred cubic centimeters.

The blood cholesterols have not been charted, as the changes are similar to those previously reported.[5] The average cholesterol prior to carotene administration was 173 mg. per hundred cubic centimeters in the normal subjects and 205 mg. in the diabetic patients. The blood cholesterol was not followed in cases 19 and 20. In cases 13, 14 and 15, diabetic, there was a marked rise in cholesterol along with the rise in carotene only in case 15. The cholesterol in this patient rose from 218 to 257 mg. per hundred cubic centimeters and remained elevated during the period of carotene administration. In the normal subjects, cases 16, 17 and 18, the cholesterol increased along with the carotene in cases 16 and 17, rising from 176 to 227 mg. per hundred cubic centimeters in the former and from 172 to 227 mg. in the latter.

COMMENT

The results in these four diabetic patients and four normal subjects show that even after continuous daily administration of carotene there is not as great an increase in blood carotene in the normal as in the diabetic individual. It seems to us that this tends to prove that dietary intake alone cannot account for the increase in blood carotene that is so often found in diabetic patients.[5] We have already [1] suggested an explanation for this increase in blood carotene in these patients; namely, that it is the result of a diminished ability on the part of the liver to convert carotene to vitamin A. Karrer [6] and others have shown that when the carotene molecule is split at its central double bond it will yield in the case of beta carotene two and in the case of alpha carotene one molecule of vitamin A. Moore [7] has shown that this transformation takes place in the liver. If the ability of the liver to accomplish this transformation should be diminished, carotene would accumulate there, absorption from the blood would be slowed up and a rise in blood carotene would result. This is still only a hypothesis, regarding which we hope that further investigation will provide more evidence.

As regards the production of carotenemia, we have observed this in three other diabetic patients and in each of them the blood carotene was above 0.500 mg. per hundred cubic centimeters. Apparently a concentration of carotene of at least this extent is necessary for the development of clinical carotenemia. Undoubtedly individual differences occur, depending on the rate of excretion through the skin.

SUMMARY AND CONCLUSIONS

1. The effects of the daily oral administration of 0.3 per cent carotene in oil on the blood carotene of four normal and four diabetic individuals was observed for periods varying from one to four months.

2. Following the administration of 1 cc. of the carotene solution to three of the normal subjects and three of the diabetic patients, there was a greater increase in the blood carotene in the latter and a more gradual return to the fasting level after carotene was stopped.

TABLE 2.—*Effect of Two Doses of 25 Cc. of 0.3 Per Cent Carotene, Administered at Intervals of One Week, on the Blood Carotene in Case 19 and Case 20, Diabetic*

	Case 19, Normal		Case 20, Diabetic	
Time	First Dose Carotene, Mg. per 100 Cc.	Second Dose Carotene, Mg. per 100 Cc.	First Dose Carotene, Mg. per 100 Cc.	Second Dose Carotene, Mg. per 100 Cc.
Fasting	0.189	0.216	0.281	0.270
5 hours	0.202	0.257	0.302	0.324
24 hours	0.257	0.270	0.297	0.270
48 hours	0.270	0.270	0.297	0.257
96 hours	0.270	0.257	0.270	0.324
1 week	0.257	0.257	0.257	0.270

3. Following the administration of 5 cc. daily to one diabetic patient and to a normal subject whose blood carotene level had been elevated as a result of the previous administration of a large dose of carotene, there

5. Brandaleone and Ralli: Rabinowitch, I. M.: Carotinemia and Diabetes: Relationship Between Sugar, Cholesterol and Carotene Contents of Blood Plasma, Arch. Int. Med. 45:586 (April) 1930.

6. Karrer, P.: Ergebn. d. Physiol. 34:812, 1932.

7. Moore, Thomas: Vitamin A and Carotene: The Distribution of Vitamin A and Carotene in the Body of the Rat, Biochem. J. 25:275 (No. 1) 1931.

was a still greater increase in the blood carotene in the diabetic patient above that of the normal subject and clinical evidence of carotenemia appeared.

4. In three normal subjects and three diabetic patients the blood cholesterol was estimated. This rose with the blood carotene in one diabetic patient and in two of the normal subjects.

5. To explain this increase in blood carotene in diabetic patients, both before and after carotene administration, it is suggested that in the diabetic patients the ability of the liver to convert carotene to vitamin A is diminished, and that this results in an increased concentration of carotene in the liver, which interferes with the absorption of carotene from the blood.

477 First Avenue.

ACUTE NONCALCULOUS CHOLECYSTITIS

A STUDY OF THIRTY-ONE CASES

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It is our purpose in this study to report those cases of acute noncalculous cholecystitis which have come under our observation in the past ten years. Certain distinguishing characteristics of the syndrome will be described and attention will be drawn to a possible hematogenous origin from some extrabiliary focus of infection.

Although gallbladder disease has been thoroughly discussed in the literature, little mention has been made of acute noncalculous cholecystitis. Judd and Phillips [1] reported 508 cases of acute gallbladder disease in which twenty-four, or 4.7 per cent, of the patients had no stones. In Blalock's [2] series, 4 per cent of 136 noncalculous cases presented a microscopic diagnosis of acute cholecystitis. Of Whipple's [3] 160 cases of acute cholecystitis, thirty patients had no stones. Mentzer [4] described thirty-eight cases of gangrenous cholecystitis, of which ten were noncalculous. None of these authors, however, discussed the importance of the noncalculous form of acute gallbladder disease as a distinct pathologic and etiologic entity.

This report on thirty-one patients who have undergone operation excludes all instances in which any doubt existed as to the presence or absence of calculi and includes only those cases in which the operating surgeon stated that no stones were present. These cases are part of a group of 379 cases of acute cholecystitis in which operation has been done since 1925.[5] When these figures are added to those of the aforementioned authors, it may be seen that in 1,221 cases of acute cholecystitis there are 100, or 8.1 per cent, of noncalculous cholecystitis (table 1).

From the Surgical Services of the Jewish Hospital of Brooklyn.

We are indebted to the following surgeons for their cooperation in permitting us the use of the reports of their cases: Drs. William Linder, John Linder, Herman Shaun, A. H. Iason, Louis Berger, H. W. Lourie and L. Morse.

1. Judd, E. S., and Phillips, J. R.: Ann. Surg. 98:771-779 (Oct.) 1933.
2. Blalock, Alfred: Bull. Johns Hopkins Hosp. 35:391 (Dec.) 1924.
3. Whipple, A. O.: Bull. New York Acad. Med. 7:211 (March) 1931.
4. Mentzer, S. H.: California & West. Med. 33:234 (April) 1930.
5. Unpublished data from the Surgical Services of the Jewish Hospital of Brooklyn.

It is interesting to note the high incidence of this disease in men. In this series, eighteen of thirty-one patients, or 58 per cent, were males, whereas in 348 cases of acute cholecystitis presenting cholelithiasis,[5] only eighty-three, or 23.8 per cent, of the patients were males. Blalock found no great disparity in his noncalculous cases, in which there were forty-seven males and fifty-three females. Furthermore, the age incidence is fairly well distributed and not predominant in any one decade of life. The old aphorism "fair, fat and forty" applied to females does not appear to hold true for the acute noncalculous form of the disease. It so happens that there is not one female between the ages of 40 and 50 years in this series (table 2).

Nine of our patients gave histories or showed signs of an extrabiliary infection preceding the cholecystitis. Patient 7 had been confined to bed with a respiratory infection diagnosed as "grip" for one week before the onset of abdominal symptoms. Patient 17 had suffered from pneumonia five weeks prior to the gallbladder infection. A note on the chart in case 18 stated that the patient had "grip" with a severe cough for the two months previous to admission for abdominal pain. Case 25 gave a history of peptic ulcer for the past fifteen years and on physical examination showed a purulent discharge from the right ear. Case 31 also gave a history of peptic ulcer, of two years' duration. Patients 2, 21 and 8 had acute pharyngitis on admission to the hospital; the latter told of frequent "sore throats." Patient 29 was admitted to the hospital with a second attack of acute cholecystitis. Inspection of his record showed that the first attack of cholecystitis had developed during his stay in the hospital the previous year, after admission for treatment of a septic sore throat.

The usual story in calculous cases of frequent previous attacks, indigestion, belching and aversion for fatty foods was noticeably absent in the majority of these cases (tables 3 and 4). Four of the thirteen female patients and eleven of the eighteen male patients, or 48.4 per cent of the total number, were admitted without any history of previous attacks or symptoms referable to gallbladder disease. Only seven of thirty-one patients told of aversion for fatty foods. Furthermore, only two of eighteen male patients, as shown in table 4, had abstained from eating fried or fatty foods. Whereas seven of the thirteen female

TABLE 1.—*Incidence of Acute Noncalculous Cholecystitis*

Author	Number of Cases	Number of Cases Without Stones	Per Cent
Judd and Phillips	508	24	4.7
Blalock	136	5	4.0
Whipple	160	30	18.7
Mentzer	38	10	26.3
Wolfson and Rothenberg	379	31	8.2
Total	1,221	100	8.1

TABLE 2.—*Sex and Age Incidence*

Age	Males	Females	Total
From 20 to 30 years	0	4	4
From 30 to 40 years	4	2	6
From 40 to 50 years	7	0	7
From 50 to 60 years	2	5	7
From 60 to 70 years	4	2	6
From 70 to 80 years	1	0	1

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patients had been troubled with indigestion and belching previous to the onset of acute cholecystitis, only four of the eighteen male patients gave positive histories of these symptoms. Thus, only 38.7 per cent of the patients in this series had indigestion, as compared to 86 per cent of Blalock's patients with all types of cholecystitis who suffered from this symptom.

Acute noncalculous cholecystitis is usually a severe and fulminating infection. The patients appear sicker, more frequently have chills, and maintain a higher temperature range than those with acute cholecystitis caused by cystic duct stone. The average admission temperature of the patient with acute noncalculous cholecystitis was 101.9 F., while that of the 348 patients with acute calculous gallbladder disease [5] was 100.9 F. Of the patients, 46.4 per cent suffered from chills, a figure that is considerably higher than that found in calculous cases. This high incidence of chills may be indicative of the embolic phenomena that sometimes precede and lead to the production of gallbladder infection. The severity of this disease is shown by the high leukocyte

TABLE 3.—*Cases Admitted During Initial Attacks*

	Number of Cases	Admitted with Initial Attacks	Per Cent
Female	13	4	30.7
Male	18	11	61.0
Totals	31	15	48.4

TABLE 4.—*Cases Presenting Aversion for Fatty Foods*

	Number of Cases	Aversion for Fats	Per Cent
Female	13	5	38.4
Male	18	2	11.1
Totals	31	7	22.5

and polymorphonuclear leukocyte blood cell counts. The average leukocyte count for the thirty-one cases was 15,600 white blood cells per cubic millimeter of blood, with an average of 84.6 per cent polymorphonuclear leukocytes. There were four patients with counts under 11,000 white blood cells per cubic millimeter of blood, and five patients with less than 80 per cent of polymorphonuclear leukocytes.

The cases in this series showed a high incidence of pain in the right upper quadrant of the abdomen but a low incidence of excruciating colic-like pain. There were two patients without abdominal pain, and in only ten of the thirty-one patients was the pain of excruciating intensity. Tenderness and rigidity in the right upper quadrant of the abdomen were present in all but two of the thirty-one patients (table 5). Radiation of pain through to the back was present in 63.3 per cent of the patients, while girdling pain occurred in only 20.6 per cent and right scapular pain in 39.3 per cent of the cases. Jaundice was noted in three patients on admission to the hospital, and five others gave a history of previous attacks. Thus, eight of thirty-one, or 25.8 per cent, of the patients at one time or another had been jaundiced. Blalock pointed out that jaundice was almost as common in patients without stones as it was in patients with stones in the gallbladder. Thirty-seven per cent of Blalock's patients with acute and chronic noncalculous cholecystitis were jaundiced, and 44 per cent with stones in the gallbladder also displayed this symptom. One must interpret jaundice in noncalculous cases as caused by cholangeitis with hepatitis rather than by obstruction.

Seventeen cholecystostomies and fourteen cholecystectomies were performed on the thirty-one patients. Sixteen surgical specimens consisting of fourteen gallbladders and two biopsies of the gallbladder were

TABLE 5.—*Summary of Symptoms and Signs*

Average temperature on admission	101.9 F.
Average leukocyte count	15,600 per cu. mm.
Average polymorphonuclear leukocytes	84.6 per cent
Cases with chills	46.4 per cent
Cases with right upper quadrant abdominal pain	93.5 per cent
Cases with excruciating colic pain	32.2 per cent
Cases with back pain	63.3 per cent
Cases with girdling pain	20.6 per cent
Cases with right scapular pain	39.3 per cent
Cases with jaundice	25.8 per cent
Cases with right upper quadrant abdominal tenderness and rigidity	93.5 per cent

reported by the pathologist. The microscopic diagnoses on these tissues were acute suppurative cholecystitis in ten cases, gangrene of the gallbladder in three cases, acute hemorrhagic cholecystitis in one case, phlegmonous cholecystitis in one case, and acute ulcerative cholecystitis in another case. Only three of the sixteen pathologic reports bore notations significant of previous inflammation, as evidenced by round and plasma cell infiltration and muscular fibrosis, and only one of these three patients gave a history of a known previous attack of gallbladder disease. The operative notes on the fifteen cases in which no specimen was obtained showed nine patients with a gross diagnosis of gangrene of the gallbladder, one of which was thought to be due to a gas bacillus infection, and six patients with the diagnosis of acute suppurative cholecystitis. If the gross changes are grouped with the microscopic changes, the distribution of the types of lesions is as follows: acute suppurative cholecystitis, sixteen cases; gangrene

TABLE 6.—*Patients with Perforated Gallbladder*

	Admission Temperature, F.	Duration of Symptoms Before Hospitalization
Case 13	104	20 days
Case 16	102.8	5 days
Case 20	102	25 days intermittently
Case 28	103	21 days
Case 29	104	30 to 40 days intermittently
Case 30	102	6 days

TABLE 7.—*Mortality Rate: Male and Female*

	Number of Cases	Lived	Died	Mortality, per Cent
Acute noncalculous cholecystitis, male	18	15	3	16.6
All types of acute cholecystitis, male	101	85	16	15.8
Acute noncalculous cholecystitis, female	13	13	0	0.0
All types of acute cholecystitis, female	275	262	13	5.0

of the gallbladder, twelve cases, and one case each of acute hemorrhagic cholecystitis, phlegmonous cholecystitis and acute ulcerative cholecystitis.

It is important to call attention to the high incidence of perforation in this series of cases, particularly since many surgeons advocate delay in operating on gallbladder disease during its acute phase. Perforation occurred in six of thirty-one, or 19.4 per cent, of the cases, five

of which were in males. It is interesting to note that all the patients with perforation gave a clinical history of several days' duration and had a temperature range to at least 102 F. Our experience has been that perforation must be considered a likely possibility in those cases presenting a sustained temperature range over 102 F. for thirty-six hours or longer. Table 6 shows the admission temperature of the patients in whom perforation had taken place and the notes relating to the duration of symptoms prior to hospital admission.

It has frequently been stated that the death rate for gallbladder disease is higher in males than in females. Table 7 corroborates this observation and shows that all three deaths were of men.

COMMENT

Rosenow,[6] C. H. Mayo,[7] Rolleston,[8] A. L. Wilkie,[9] D. P. D. Wilkie,[10] Rehfuss and Nelson[11] and others believe that cholecystitis is often the result of hematogenous bacterial infection of the wall of the viscus, while Graham and his co-workers[12] think that cholecystitis is often the result of invasion of the wall of the gallbladder through the lymphatic channels from the liver. Granting the validity of these two theories, stones and cystic duct obstruction are unnecessary factors in the production of an acute inflammatory lesion, whether it is suppurative or gangrenous. Thus, an embolus to the cystic artery or one of its branches may produce a gangrenous lesion in a previously normal gallbladder, or a suppurative noncalculous cholecystitis may follow invasion of the wall by bacteria which enter through the cystic artery or lymphatics.

We believe that acute noncalculous cholecystitis is a distinct etiologic entity, produced by hematogenous infection rather than by obstruction of the cystic duct. The syndrome resembles an infection of hematogenous origin in that there is no predilection for either sex or for any one particular age group (table 2). Then too, almost one third of the patients gave histories or showed signs of a focal infection which might have served as the primary source of the gallbladder infection. Furthermore, the infrequent history of previous attacks and the low incidence of the usual prodromal symptoms of aversion for fats, indigestion and pyrosis lead us to believe that this type of gallbladder disease differs greatly in etiology and pathogenesis from acute calculous cholecystitis with cystic duct block (tables 3 and 4).

SUMMARY

1. Thirty-one cases of acute noncalculous cholecystitis reported from a series of 379 cases of acute cholecystitis gives an incidence of 8.2 per cent.

2. Fifty-eight per cent of the patients were males.

3. Aversion for fatty foods, indigestion, belching, and a history of previous attacks are not as common in patients with acute noncalculous cholecystitis as in those with acute calculous cholecystitis.

4. Acute noncalculous cholecystitis is a disease accompanied by higher temperature range, greater incidence of chills, greater morbidity and a greater incidence of perforation than other forms of acute cholecystitis.

5. It is our belief that acute noncalculous cholecystitis is produced by a hematogenous infection rather than by cystic duct obstruction.

6. The mortality in this group of thirty-one cases was 9.6 per cent. All deaths occurred in male patients.

564 Ocean Avenue—175 Eastern Parkway.

6. Rosenow, E. C.: Coll. Papers of Mayo Clin. 8: 222, 1916.
7. Mayo, C. H.: Ann. Surg. 81: 935 (May) 1925.
8. Rolleston, Humphry: Lancet 1: 1207 (June 6) 1925.
9. Wilkie, A. L., quoted by Wilkie, D. P. D.: Proc. Internat. Assemb. Inter-State Post-Grad. M. A. North America (1929) 8: 373, 1930.
10. Wilkie, D. P. D.: Personal communication to the authors.
11. Rehfuss, M. E., and Nelson, G. M.: Am. J. Digest. Dis. & Nutrition 2: 759 (Jan.) 1935.
12. Graham, E. A.; Cole, W. H.; Copher, G. H., and Moore, Sherwood: Diseases of the Gall Bladder and Bile Ducts, Philadelphia, Lea & Febiger, 1928, p. 119.

ZINC IONIZATION IN NASAL ALLERGY

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My purpose in this communication is:

1. To evaluate the clinical results obtained through zinc ionization of the nasal mucous membrane of twenty-five individuals suffering from hyperesthetic rhinitis, and ten with seasonal hay fever, the observations having been carried on over a period of fifteen months.

2. To make a comparison of the end results obtained in this series with the end results obtained by the use of escharotics in a series of twenty individuals suffering with hyperesthetic rhinitis and ten others with hay fever.

The technic employed for ionization was the application of a galvanic current of from 15 to 20 milliamperes to a solution of zinc sulfate for a period of from fifteen to twenty minutes. The solution of zinc sulfate was introduced into the nasal chamber either in the form of a jelly or with gauze packing. One side of the nose was treated during one sitting, a period of from five to seven days being allowed to elapse before the second side was treated. An inexpensive battery set with an ammeter was used to create current. Hurd[1] has observed that while each apparatus has its adherents, it makes no difference clinically or histologically which type of apparatus is used. Zinc was the sole electrolyte employed, as no advantage is apparent in the use of mixed electrolytes described by Warwick.[2]

HISTOLOGIC OBSERVATIONS

Sections of mucous membrane taken at varying periods following ionization show immediate changes in the surface epithelium, varying from complete destruction of the epithelium to simple inflammatory processes attended by the usual cellular infiltration and vascular changes found in any instance of inflammation of mucous membrane. Sections taken periodically after ionization reveal that regeneration takes place in periods varying from three months to three weeks. The tendency to fibrosis was not marked, the subepithelial stroma showing little tendency to thickening after resolution was complete. Cilia usually remain absent, the surface of the epithelium being pseudostratified in form. McMahon[3] has observed similar epithelial changes following ionization of nasal mucosa in dogs, but fibrosis was more marked in these animals than in the series just described. Concerning the effects of ionization on cilia, one must recall that Hansel[4] has

1. Hurd, L. M.: Treatment of Hay Fever and Hyperesthetic Rhinitis by Ionization, Arch. Otolaryng. 22: 416-424 (Oct.) 1935.
2. Warwick, H. L.: Laryngoscope 44: 172 (March) 1934.
3. McMahon, Bt-J.: Late Changes in Mucosa of Frontal Sinuses and Nose of Dogs Following Ionization with Zinc Sulfate, Arch. Otolaryng. 22: 454 (Oct.) 1935; Tr. Am. Laryng., Rhin. & Otol. Soc. 1935, pp. 147-159; Ann. Oto., Rhin. & Laryng. 45: 643 (Sept.) 1936.
4. Hansel, F. K.: Ann. Otol., Rhin. & Laryng. 39: 510 (June) 1930.

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shown that one of the histologic effects of allergic nasal disease itself is the loss of cilia.

The histologic changes following zinc ionization are similar to those following the application of trichloroacetic acid or phenol to the nasal mucous membrane. It was impossible to differentiate mucous membrane that had been ionized from mucous membrane that had been treated with escharotic, such as trichloroacetic acid or phenol. The periods of regeneration following ionization and application of escharotics were also similar.

CLINICAL OBSERVATIONS

Hyperesthetic Rhinitis.—Twenty-five persons suffering with nonseasonal allergic rhinitis were treated with zinc ionization. All gave typical allergic histories, having had trouble for from one month to seven years. All showed the usual pale waterlogged mucous membrane but at the time of treatment none had either allergic or infectious polyps, and none showed evidences of secondary sinus infection found so commonly in this type of allergic nasal disease. Seven had skin sensitivity to certain foods and inhalants, but, as usual in hyperesthetic rhinitis, skin tests were of questionable value. Ionization had no effect on the clinical course of the disease in twenty of the patients; i. e., 80 per cent. Five, or 20 per cent, were free from symptoms for from five to eleven months. The nasal mucous membrane of these five patients became pink and otherwise normal to macroscopic examination. These periods of remission are much longer than the usual periods of spontaneous remission observed frequently in the course of untreated hyperesthetic rhinitis with proved nonseasonal nasal allergy.

The records of twenty patients treated with trichloroacetic acid or phenol were examined in order to compare the results obtained with simple escharotics with those obtained with ionization. In all cases the escharotics were applied to the anterior tips of both middle turbinates, the medial and anterior lateral surfaces of both inferior turbinates, and both sides of the anterior septal wall. Of ten patients treated with phenol, four, or 40 per cent, had periods of remission prolonged for from five to nineteen months. Of the ten treated with trichloroacetic acid three, or 30 per cent, had periods of remission which lasted for from four months to two and one-half years.

Hay Fever.—The usual clinical course of hay fever of ten individuals was in no way altered by ionization. These ten individuals suffered with the autumnal type of seasonal nasal allergy and all showed definite skin sensitivity to ambrosial pollens. They had had seasonal symptoms for periods varying from three to thirteen years. Unsuccessful attempts had been made to desensitize six of these individuals by pollen injections during previous years. Four had received no previous treatment. Five of the ten had had pollen asthma complicating the hay fever prior to ionization. One developed pollen asthma following ionization, but so many varying factors presented themselves in an attempt to interpret the relationship of ionization to this complication that no conclusion could be drawn. The negative clinical results obtained through ionization in hay fever corresponded to those recently reported by Ramirez.[5] Ionization was instituted in all cases after the onset of symptoms, as recommended by Tobey.[6] No histologic sections were made of the nasal mucous membrane of patients treated by ionization or escharotics because of the negative end results obtained. A group of hay fever patients treated with escharotics in the manner just described also gave uniformly negative results.

COMPLICATIONS FOLLOWING IONIZATION

1. *Anosmia.*—Two patients suffering from hyperesthetic rhinitis developed anosmia. Both of these patients had a normal sense of smell before ionization but lost the ability to detect unpleasant, pungent or mild, pleasant odors within twenty-four hours after ionization. Both complained of associated taste disturbances. This unfortunate complication persisted for four months with one patient and for seven months with the other. Both were private patients, and as neither was benefited by the ionization treatment these complications resulted in most unpleasant situations. My own relief was even greater than that of the patients' when the anosmia proved to be transitory. A period of seven months can seem interminable under certain circumstances.

It should not be forgotten that many persons suffering from hyperesthetic rhinitis have disturbances of the sense of smell resulting from the disease process itself. The rhinologist, therefore, for his own protection, should test the patient's sense of smell before employing ionization, just as the ophthalmologist tests vision before removing a foreign body.

2. *Sphenopalatine Neuritis.*—One patient developed a unilateral headache referred from the eye on the affected side to the lower occipital region and down into the neck and shoulders. The pain was typical of the syndrome described by Sleuder. It persisted for three and one-half months with short periods of remission following application of cocaine to the sphenopalatine foramen. The patient refused to submit to alcohol injection.

No complications have ever been noted from the use of escharotics.

CONCLUSIONS

1. The histologic effects of ionization of the nasal mucous membrane do not differ from those resulting from the application of escharotics to the nasal mucous membrane. In neither instance is there marked evidence of fibrosis.

2. The clinical course of hyperesthetic rhinitis was influenced in only 5 per cent of twenty-five patients who were treated with ionization. Slightly better results were obtained through the use of escharotics.

3. The clinical course of hay fever was not altered by the use of either ionization or escharotics.

4. Ionization of the nasal mucous membrane carries a definite risk of complications that do not present themselves through the use of escharotics.

104 South Michigan Avenue.

5. Ramirez, M. A.: Disappointing Results from the Ionization Treatment for Hay Fever, J. A. M. A. 106:281 (Jan. 25) 1936.

6. Tobey, H. G.: Experiences in Ionization Treatment of Nasal Mucous Membrane, Tr. Am. Laryng., Rhin. & Otol. Soc., 1935, pp. 303-391.

Vectors of Yellow Fever.—When it was first proven that yellow fever is transmitted by Stegomyia fasciatus, now called Aedes aegypti, it was believed that this mosquito was the only vector of the disease. We now know that there are more than a dozen mosquitoes that transmit the virus under laboratory conditions, some of them quite readily. We know also that yellow fever is endemic in areas where Aedes aegypti do not exist and we do not yet know what the vector in those areas is.—Lloyd, B. J.: Public Health Significance of Our Newer Knowledge of Yellow Fever, *Southern Medical Journal* 29:533 (May) 1936.

Clinical Notes, Suggestions and New Instruments

SIMPLIFIED APPARATUS FOR THE ADMINISTRATION OF PARENTERAL FLUID

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The production of a reliable supply of parenteral fluids, in otherwise adequately equipped hospitals, has been hindered by the lack of simple apparatus in which chemically pure solutions can be dispensed safely and economically. The apparatus[1] illustrated (fig. 1) was designed to provide easy sterilization, safe storage under hermetic seal, and ready administration from the original container.

Fig. 1.—Apparatus for administration of parenteral fluid. Preparation, sterilization, storage and administration of fluid are accomplished in individual flasks. The necessary glassware, tubing and needles are sterilized in a central supply room.

The new apparatus consists of a stainless steel stopper,[2] which fits a rubber bushing[3] inserted into the mouth of a thick-walled, short necked 1,500 cc. pyrex flask.[1] The flask is emptied by substituting for the stem of the steel stopper a pyrex tube, which is provided at one end with a capillary orifice which acts as an air valve and at the other end with the usual rubber tubing connector.

When the stem of the stopper is partially inserted into the rubber bushing, the channel cut into its lower third provides an adequate vent for the escape of air and steam during sterilization (fig. 2 *A*). On removal from the autoclave the stopper is pushed the remainder of the way into the bushing, forming a hermetic seal (fig. 2 *B*). The contraction of the contents of the flask during cooling produces a moderate vacuum, which aids in maintaining the seal. The inrush of air when the stopper is removed assures the user of the sterility of the contents of the flask.

From the Surgical Clinic of the Peter Bent Brigham Hospital and the Laboratory of Surgical Research, Harvard Medical School.

1. May be obtained from Macalaster Bicknell Company, 171 Washington Street, Cambridge, Mass.
2. Made by Arthur H. Gerry, Boston.
3. Made by H. O. West, Philadelphia.

The rubber bushing is molded of nontoxic, heat resistant rubber, which retains its resilience after repeated sterilization. The pyrex vent tube is sufficiently rugged to withstand the mechanical and thermal shock to which it may be subjected during ordinary usage.

Directions for Making Various Solutions

No.	Solution	Chemicals in Stock Solution	Net Weight of Stock Solution	Cc. Added to Flask	Net Weight of Flask*
1	5% dextrose in distilled water	1,000 Gm. dextrose C. P.	2,355 Gm.	100	1,000 Gm.
2	10% dextrose in distilled water	1,000 Gm. dextrose C. P.	2,355 Gm.	200	1,005 Gm.
3	0.85% saline solution	170 Gm. sodium chloride C. P.	1,100 Gm.	10	1,000 Gm.
4	5% dextrose in 0.85% saline solution	(a) 1,000 Gm. dextrose C. P.	2,355 Gm.	100	1,000 Gm.
		(b) 170 Gm. sodium chloride C. P.	1,100 Gm.	10	
5	10% dextrose in 0.85% saline solution	(a) 1,000 Gm. dextrose C. P.	2,355 Gm.	200	1,000 Gm.
		(b) 170 Gm. sodium chloride C. P.	1,100 Gm.	10	
6	Ringer's solution	9.0 Gm. potassium chloride C. P.			
		7.4 Gm. calcium chloride C. P.	1,145 Gm.	10	1,575 Gm.
		280.5 Gm. sodium chloride C. P.			
7	50% dextrose	1,000 Gm. dextrose C. P.	2,405 Gm.	105	
8	30% sucrose	1,000 Gm. sucrose C. P.	2,410 Gm.	105	

* Allowance has been made for a 5 per cent loss during sterilization.

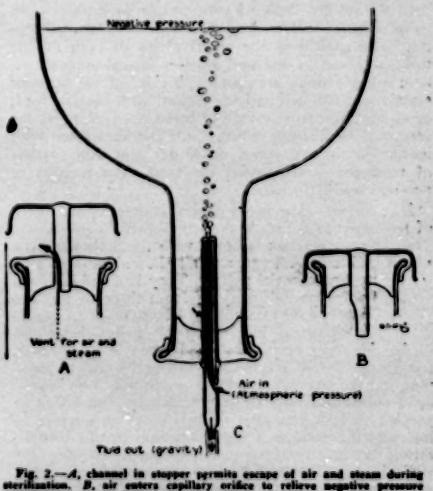

Fig. 2.—*A*, channel in stopper permits escape of air and steam during sterilization. *B*, air enters capillary orifice to relieve negative pressure within the inverted flask. *C*, vacuum seal produced by inserting stopper into bushing and permitting flask to cool.

After the steel stopper has been pulled from the flask by a twisting motion and the inrush of air has been noted, the vent tube is pushed into the hole in the rubber bushing as far as the shoulder. The flask is then inverted and hung in the split ring

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bracket [4] (fig. 2 *C*). The rubber tube and needle are filled with solution and the infusion may be started.

The technic of cleaning the glassware, rubber goods and needles described in a previous communication must be followed rigidly.[5] The preparation of the solution can be facilitated by using the technic illustrated (fig. 2). Fresh, singly distilled water is drawn from the pyrex carboy, which is used to collect the immediate supply only. The carboy is drained each night and sterilized with live steam each morning.

Isotonic sodium chloride solution (0.85 per cent) is prepared from a fresh stock solution made by adding distilled water to 170 Gm. of chemically pure sodium chloride, previously weighed out in a counterbalanced flask, until a net weight of 1,108 Gm. has been reached. The flask is stoppered with a clean rubber stopper and shaken until solution is complete. This solution is then filtered, with the aid of suction, directly into a 300 cc. pyrex buret. Fifty cubic centimeters of the filtrate is measured

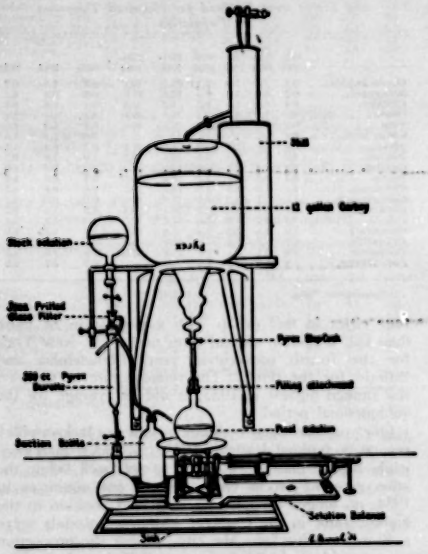

Fig. 3.—Simple technic for the preparation of solutions, which avoids mass filtration and volumetric transfer of fluid.

into a counterbalanced 1,500 cc. pyrex flask, and distilled water is added to a net weight of 1,049 Gm.[6] A clean rubber bushing is fitted into the mouth of the flask, its skirt is turned down, and the stem of the steel stopper is partially inserted into the bushing.

The flasks are then autoclaved for twenty minutes at 250 F. After sterilization the steam supply to the autoclave is shut off and the autoclave permitted to cool to 180 F. before it is opened. In this way the concentration of solution resulting from the ebullition of steam that follows sudden relief of pressure is avoided. As the flasks are removed from the autoclave, the steel stoppers are pushed in to complete the seal.

The sterile solutions can be stored indefinitely without impairing their value as safe parenteral fluids. If a sufficient supply of sterile sets of pyrex vent tubes, rubber tubing and needles is kept on hand, the solutions are instantly available and rational parenteral therapy is constantly at the disposal of the clinician.

4. Made by J. H. Emerson, Cambridge, Mass.
5. Walter, C. W.: Economical Intravenous Therapy, J. A. M. A. 104:1688-1690 (May 11) 1935.
6. Other solutions are prepared as shown in the accompanying table.

Special Article

TYPHOID IN THE LARGE CITIES OF THE UNITED STATES IN 1935

TWENTY-FOURTH ANNUAL REPORT

This report deals with the same ninety-three cities that have been discussed in the corresponding articles for the years beginning with 1930. The number of deaths from typhoid during 1935 in each city (except Scranton, as explained in a note to table 2) has been supplied by the respective health department. The United States Bureau of the Census is working out a new method for estimating the populations of the large cities in view of the extraordinary changes in urban and rural distribution since 1930; but as such estimates are not yet available the rates in the present article are based on the same population figures as were used for the 1934 rates; namely, the estimates for midyear 1933 as computed by the Bureau of the Census according to a method described in our last year's report.

TABLE 1.—*Death Rates of Fourteen Cities in New England States from Typhoid per Hundred Thousand of Population*

	1931-1935	1926-1930	1921-1925	1916-1920	1911-1915	1906-1910	1935	1934	1933
Fall River	0.2*	2.3	2.3	3.5	13.4	18.5	0.0	0.0	0.0
Lynn	0.2	1.5	1.6	3.9	7.2	14.1	1.0	0.0	0.0
Bridgeport	0.3	0.5	2.3	4.8	5.0	10.3	0.0	0.0	0.7
Somerville	0.4	1.3	1.6	2.8	7.9	12.1	0.0	0.0	1.9
Waterbury	0.4	1.2	1.0	4.0	16.9	....	2.0	0.0	0.0
Boston	0.6	1.2	2.2	2.5	9.0	16.0	0.5	0.9	0.3
Worcester	0.6	1.0	2.3	3.5	5.0	11.8	0.5	0.0	0.5
New Haven	0.7	0.6	4.4	6.6	16.2	20.8	0.0	0.0	1.3
Cambridge	0.9	2.1	4.3	2.5	4.9	9.8	0.0	0.2	1.5
Lowell	1.0*	2.6	2.4	5.2	10.2	13.9	1.0	0.0	1.0
Springfield	1.0	0.4	2.0	4.4	17.6	19.9	0.0	0.0	0.6
New Bedford	1.1*	1.5	1.7	6.0	15.0	16.1	0.0	1.3	1.3
Providence	1.1	1.3	1.8	3.5	8.7	21.3	0.5	1.2	1.2
Hartford	1.2	1.3	2.5	6.0	15.0	19.0	0.6	0.6	0.7

* Rate computed from population as of April 1, 1930, as no estimate for July 1, 1935, was made by the Census Bureau.

Deaths from paratyphoid, when these were specified in the reports made to us by a health department, have been excluded from the deaths on which we have based the typhoid death rate. This follows the distinction set by the latest edition of the Manual of International Causes of Death (edition 4, 1931); in the previous edition (1921) typhoid and paratyphoid were grouped together. The paratyphoid deaths thus excluded, beginning with 1931, have been as follows: Cleveland, one paratyphoid death in 1931 (thirty-one typhoid deaths); Jacksonville, one paratyphoid death in 1933 (one typhoid death also in that year);[1] Knoxville, two paratyphoid deaths in 1935 in addition to six typhoid deaths; New Haven, one paratyphoid death in 1934 and one in 1935 (no typhoid death in either year); New York, one paratyphoid death in 1931 (seventy-

The preceding articles in this series were published in THE JOURNAL, May 31, 1913, p. 1702; May 9, 1914, p. 1473; April 17, 1915, p. 1322; April 22, 1916, p. 1303; March 17, 1917, p. 945; March 16, 1918, p. 777; April 5, 1919, p. 997; March 6, 1920, p. 672; March 26, 1921, p. 840; March 25, 1922, p. 890; March 10, 1923, p. 691; Feb. 2, 1924, p. 389; March 14, 1925, p. 813; March 27, 1926, p. 948; April 9, 1927, p. 1148; May 19, 1928, p. 1624; May 18, 1929, p. 1674; May 17, 1930, p. 1574; May 9, 1931, p. 1576; April 30, 1932, p. 1350; May 13, 1933, p. 1491; May 19, 1934, p. 1677, and June 8, 1935, p. 2093.

1. The Jacksonville typhoid death rate for 1933 was erroneously figured without excluding the paratyphoid death. Its correct 1933 rate should therefore be 0.7 instead of 1.4. The following corrections should be made in the tables in the 1933 article: tables 3 and 9, change Jacksonville rate to 0.7; table 10, for 1933 the number of cities with rates 1.0 to 1.9 is 18, with rates 0.1 to 0.9 is 34; table 11, third footnote, total typhoid deaths number 469; table 12, South Atlantic typhoid deaths number 54 and the group rate is 2.28.

six typhoid);[2] Oakland, two paratyphoid deaths in 1934 (also two typhoid deaths); Wichita, two paratyphoid deaths in 1935 (no typhoid deaths); Wilmington, one paratyphoid death in 1932 (also one typhoid death in that year).

The problem of including in the rates for each city the typhoid rate for nonresidents is still conspicuous.

TABLE 2.—*Death Rates of Eighteen Cities in Middle Atlantic States from Typhoid per Hundred Thousand of Population*

	1921-1925	1926-1930	1931-1935	1926-1930	1931-1935	1926-1930	1935	1934	1932
Jersey City	0.5	0.9	2.7	4.5	7.2	12.6	0.0	0.0	0.5
Newark	0.5	0.9	2.3	3.3	6.6	14.6	0.0	0.2	0.4
Bayonne	0.4	1.1	2.2	10.0	21.9	42.0	0.0	0.0	0.0
Rochester	0.4	1.7	2.1	2.9	9.6	12.8	0.3	0.0	0.3
Buffalo	0.6	2.7	3.9	8.1	15.4	22.8	0.5	0.3	0.3
Utica	0.6	1.1	3.9*	....	....	....	1.0	0.0	0.0
Yonkers	0.7	0.5	1.7	4.8	8.9	16.3	1.4	0.0	0.3
New York	0.8	1.3	2.6	3.5	8.0	13.5	0.5	0.6	0.9
Syracuse	0.8	0.8	2.3	7.7	12.3	15.6	0.5	0.5	1.3
Elizabeth	0.9	1.6	2.4	3.3	8.0	16.6	0.0	0.9	0.0
Philadelphia	0.9	1.1	2.2	4.9	11.2	41.7	0.9	0.9	0.8
Pittsburgh	0.9	2.4	3.9	7.7	13.9	61.0	0.6	1.5	0.1
Paterson	0.9	1.0	2.3	4.1	9.1	16.3	0.0	0.7	0.0
Erie	1.0	0.9	2.3	6.9	69.0	48.5	0.0	1.7	0.0
Albany	1.1	1.5	3.6	9.0	16.6	17.4	0.6	0.0	0.0
Trenton	1.1	2.1	8.2	6.6	22.3	26.1	0.0	0.8	2.4
Scranton	1.4	1.8	2.4	2.8	9.3	31.5	0.0	0.0	2.4
Camden	2.8	4.4	5.9	4.9	4.5	4.0	2.5	1.7	3.3

* Incomplete data.

† Typhoid deaths for Scranton furnished by Pennsylvania Department of Health, Harrisburg.

In twenty-four of the ninety-three cities we are informed that one third or more of the typhoid deaths were in nonresidents. These are indicated in table 9 and should be also referred to in examining tables 1 to 8.[3] Complete data are unavailable for a few cities as described (tables 2 to 8, "incomplete data") in the report covering the year 1932.

Six of the large New England cities had no typhoid deaths in 1935 (table 1), four of them for the second year in succession. The quinquennial average 1931-1935 is particularly interesting since it shows that all but two of the New England cities (New Haven, Springfield) had lower average rates than for the preceding five years. Bridgeport has had the lowest

TABLE 3.—*Death Rates of Nine Cities in South Atlantic States from Typhoid per Hundred Thousand of Population*

	1921-1925	1926-1930	1931-1935	1926-1930	1931-1935	1926-1930	1935	1934	1933
Baltimore	1.4	3.2	4.0	11.8	21.7	33.1	1.5	1.3	0.4
Wilmington	1.5	3.1	4.7	25.8*	21.8*	33.0	0.9†	1.9	1.9
Jacksonville	1.7	4.4	....	....	....	....	0.0	1.4	0.7†
Miami	1.8	3.6	....	....	....	....	2.9	1.8	2.7
Richmond	2.3	1.9	5.7	9.7	15.7	34.0	2.7	3.5	1.6
Washington	2.6	2.3	5.4	8.5	17.2	28.7	2.6	1.8	3.6
Tampa	3.0	3.3	10.1	62.5*	....	....	6.5	0.0	1.3
Norfolk	4.5	5.2	8.6	8.5	21.7	42.1	3.4†	3.4	3.2
Atlanta	7.2	11.1	14.5	14.2	21.4	38.4	4.6	3.9	6.0

* Incomplete data.

† Rate computed from population as of April 1, 1930, as no estimate for July 1, 1935, was made by the Census Bureau.

‡ This rate in our two previous articles was given as 1.4, owing to the erroneous inclusion of one paratyphoid death.

average rate for the ten-year period 1926-1935. The New England group as a whole (population 2,624,805) recorded for 1935 the lowest group rate (0.49) yet reached by that group and also the lowest ever recorded by any of the eight geographic divisions. This is the seventh year of progressive decline in the typhoid group rate for the New England cities (table 12).

The Middle Atlantic cities (table 2) have likewise had for the past four years a group rate under 1.0, thus continuing a progressive decline. As in 1934, seven of the eighteen cities report the complete absence of typhoid deaths, Elizabeth for the fourth consecutive year. Scranton, which had the highest rate of the group in 1933, reported no typhoid deaths in 1934 or 1935. Jersey City likewise completes its second consecutive year without a typhoid death. Pittsburgh's rate (0.6) is better than in 1934, although not equal to the conspicuously low rate (0.1) for 1933. The

TABLE 4.—*Death Rates of Eighteen Cities in East North Central States from Typhoid per Hundred Thousand of Population*

	1921-1925	1926-1930	1931-1935	1926-1930	1931-1935	1926-1930	1935	1934	1933
Grand Rapids	0.2	1.0	1.0	0.1	25.5	29.7	0.0	0.0	0.0
Milwaukee	0.2	0.5	1.5	6.5	12.6	17.0	0.0	0.1	0.1
Chicago	0.4	0.5	1.6	2.4	8.2	15.8	0.4	0.6	0.3
Detroit	0.6	1.3	4.1	8.1	15.4	22.8	0.3	1.1	0.6
Flint	0.7	1.6	4.6	22.7	16.8	66.9	0.6	1.2	0.0
South Bend	0.7	....	....	....	....	....	0.0	1.5	1.0
Akron	0.8	1.5	2.4	10.0	21.0	27.7*	0.7	1.1	1.1
Dayton	0.8	1.9	2.3	9.3	14.8	22.3	1.0	1.0	0.5
Canton	0.9	1.4	2.3	8.9	....	....	0.0	0.9	0.0
Peoria	0.9	0.2	1.7	6.7	16.4	15.7*	0.0	0.0	0.5
Cleveland	1.1	1.0	2.0	4.0	10.0	15.7	0.6	0.8	0.5
Youngstown	1.1	1.1	7.5	10.2	20.3	25.1	0.0	0.5	2.5
Indianapolis	1.2	2.7	4.6	10.3	20.3	30.4	1.3	1.1	0.5
Toledo	1.3	1.0	2.0	10.0	21.4	37.3	1.3	1.3	1.3
Cincinnati	1.4	2.5	3.5	5.4	7.8	20.1	1.3	1.5	0.9
Evansville	1.9	6.2	5.0	17.5	22.0	25.0	4.7	1.5	0.0
Columbus	2.0	2.1	3.5	7.1	15.3	69.0	2.0	2.0	1.7
Fort Wayne	2.2	4.2	12.9	7.3	....	....	0.0	0.7	0.0

* Incomplete data.

four cities in this group with a population of more than half a million all had rates under 1.0, New York for the fourth consecutive year, Philadelphia and Buffalo for the third. The typhoid rate in Camden still ranked highest in 1935, as did its average for the quinquennial period.

One of the South Atlantic cities (Jacksonville) reports no typhoid deaths in 1935. Atlanta's rate (4.6), while higher than 1934 (3.9), is still well below the other rates of recent years and the city again, as in 1934, no longer occupies its long held position in the highest rank in the country. Atlanta hospitals serve a 40-mile radius from the city, so that the proportion of nonresident deaths is large. Baltimore had about the same rate (1.5) in 1935 as in 1934 (1.3), but four

TABLE 5.—*Death Rates of Six Cities in East South Central States from Typhoid per Hundred Thousand of Population*

	1921-1925	1926-1930	1931-1935	1926-1930	1931-1935	1926-1930	1935	1934	1933
Louisville	2.3	3.7	4.9	9.7	10.7	22.7	1.6	2.5	1.9
Birmingham	3.9	8.0	10.5	21.5	41.3	61.7	4.0	5.5	4.0
Chattanooga	4.7	8.0	10.6	27.2	38.5*	....	2.4	8.1	3.5
Nashville	5.0	14.2	17.5	28.7	49.2	61.2	7.0	2.5	7.5
Knoxville	5.7	10.7	20.6	23.5*	....	....	5.4	8.9	7.1
Memphis	7.9	9.3	10.9	27.7	42.5	58.3	5.0	8.4	7.5

* Incomplete data.

of the twelve deaths are stated to be in nonresidents. The group rate for the South Atlantic cities (2.58) is slightly higher than for the three preceding years, but its quinquennial average 1931-1935 shows a marked improvement over the preceding five year period.

After the decided increase in typhoid mortality which occurred in the cities of the East North Central group

2. The paratyphoid death in New York in 1931 was included by mistake in the total deaths on which the typhoid rate was calculated. Its exclusion does not change the New York rate for the year (1.1) or the Middle Atlantic group rate (1.86) but it lessens by one the totals for the country in tables 11 and 12 in the article covering the year 1931.

3. The problem of the nonresident has been discussed at some length in our previous reports; for example, J. A. M. A. 100:1491 (May 15) 1933 and 98:1550 (April 30) 1932.

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(table 4) in 1934, the rate has dropped back almost to the 1933 level, with fifty-eight deaths in 1935 as against eighty-eight and fifty-four in 1934 and 1933 respectively. Five cities had clear typhoid records in 1935, and twelve had rates under 1.0 as against eight in 1934. Three cities had higher typhoid rates in 1935 than in 1934, the most noteworthy increase being in Evansville

TABLE 6.—*Death Rates of Nine Cities in West North Central States from Typhoid per Hundred Thousand of Population*

	1931-1935	1926-1930	1921-1925	1916-1920	1911-1915	1906-1910	1935	1934	1933
St. Paul	0.7	1.4	2.4	3.1	9.2	12.8	0.3	0.0	1.4
Wichita	0.7	1.2	0.2	...	....	....	0.0	0.0	1.7
Minneapolis	1.0	0.2	1.2	5.0	10.0	22.1	1.2	1.2	0.2
Omaha	0.9	1.3	2.3	3.7	14.9	49.7	0.0	0.0	0.5
Duluth	1.0	1.1	1.7	4.4	10.8	46.5	1.0	1.0	1.0
Kansas City, Kan.	1.1	1.7	5.0	9.4	21.1	74.5*	1.6	1.6	0.8
Kansas City, Mo.	1.5	2.0	4.7	10.0	16.2	35.6	1.0	1.4	2.4
St. Louis	1.0	2.1	3.0	6.3	12.1	14.7	0.7	1.7	1.2
Des Moines	2.1	2.6	2.2	6.4	13.9	23.7	2.1	6.2	2.0

* Incomplete data.

following four years of little or no typhoid. Fort Wayne again has a clear record in 1935 after its bad year in 1934. Detroit has the lowest rate in its history (0.3). Chicago also continues to have a very low rate.

TABLE 7.—*Death Rates of Eight Cities in West South Central States from Typhoid per Hundred Thousand of Population*

	1931-1935	1926-1930	1921-1925	1916-1920	1911-1915	1906-1910	1935	1934	1933
Tulsa	1.1	2.3	10.2*	...	....	....	0.7	2.7	0.0
Houston	5.2	4.5	7.6	14.2	28.1	49.5*	2.2	2.6	4.0
San Antonio	4.3	4.6	9.3	23.3	29.5	35.9	3.5	4.9	4.9
Oklahoma City	4.3	7.4*	...	...	....	....	2.5	5.9	3.4
Fort Worth	4.6	5.9	6.1	16.3*	11.9	27.5	1.2	5.9	7.6
El Paso	4.9	9.1	10.3	20.7	42.5	....	7.8	3.8	2.3
Dallas	5.4	7.2	11.3	17.2	....	....	2.9	4.3	5.3
New Orleans	9.0	9.9	11.6	17.5	29.0	35.6	7.4	8.9	9.1

* Incomplete data.

The six East South Central cities (table 5) had forty-nine typhoid deaths in 1935 as against sixty-one in both 1933 and 1934. Knoxville and Nashville, which showed decreases in 1934, had much higher rates in

TABLE 8.—*Death Rates of Eleven Cities in Mountain and Pacific States from Typhoid per Hundred Thousand of Population*

	1931-1935	1926-1930	1921-1925	1916-1920	1911-1915	1906-1910	1935	1934	1933
Long Beach	0.2	1.1	2.1*	...	....	....	0.0	0.0	0.0
Seattle	0.2	0.2	2.2	2.2	4.7	24.3	0.3	0.3	0.3
Tacoma	0.7	1.2	3.7	5.2	10.4	19.0	0.0	0.0	0.0
Los Angeles	0.5	1.3	2.0	2.5	10.7	19.0	0.5	1.0	0.5
Portland	0.5	2.3	2.5	4.5	10.5	23.2	1.0	0.5	0.0
San Francisco	0.5	1.0	2.5	4.5	13.0	28.3	0.5	0.1	0.1
Oakland	1.0	1.3	2.0	3.5	8.7	21.5	1.7	0.7	0.7
Salt Lake City	1.3	1.5	6.0	8.3	12.2	41.1	1.4	1.4	0.0
San Diego	1.3	1.0	1.5	7.9	17.0	30.5	0.0	1.2	4.3
Spokane	1.4	2.2	4.4	4.9	17.1	39.3	0.5	2.5	0.0
Denver	1.5	2.6	5.1	5.5	12.0	27.5	0.7	1.4	2.7

* Incomplete data.

1935. The other four cities reversed this picture. Louisville and Memphis record their lowest rates since 1930. Chattanooga dropped from 8.1 to 2.4. The group as a whole shows a notable diminution of the typhoid average for the last five years (table 12).

In the West North Central cities (table 6) the typhoid mortality in 1935 was considerably less than in 1934, twenty-three deaths as against forty. It is to be noted, however, that the population in this geographic division is very close to that of the New England cities, while the number of typhoid deaths is nearly twice as great both for the years 1934 and 1935 (table 12) and for the quinquennial period. It is encouraging that the group rate for the West North Central cities for

TABLE 9.—*Death Rates from Typhoid in 1935*

Honor Roll: No Typhoid Death (Twenty-four Cities)

Bridgeport	Jacksonville	New Haven	Somerville
Cambridge	Jersey City	Omaha	Springfield
Elizabeth	Long Beach	Paterson	Tacoma
Erie	Milwaukee	Peoria	Trenton
Fort Wayne	Newark	San Diego	Wichita
Grand Rapids	New Bedford	Scranton	Youngstown

First Rank: from 0.1 to 1.9 Deaths per Hundred Thousand (Forty-Seven Cities)

Detroit	0.3	Tulsa	0.7	Lowell	1.9
Rochester	0.3*	Albany	0.8	Lynn	1.9
St. Paul	0.3	Providence	0.8	Utica	1.9*
Chicago	0.4	San Francisco	0.8†	Fort Worth	1.2
Boston	0.5	Seattle	0.3†	Minneapolis	1.2
Buffalo	0.5†	Spokane	0.5	Cincinnati	1.3
New York	0.5	Canton	0.9	Indianapolis	1.3
Syracuse	0.5	Fall River	0.9	Toledo	1.3
Worcester	0.5	Los Angeles	0.9†	Salt Lake City	1.4†
Cleveland	0.6†	Philadelphia	0.9	Yonkers	1.4
Flint	0.6	Reading	0.9	Baltimore	1.5†
Hartford	0.6	South Bend	0.9	Kansas City, Kan.	1.6
Pittsburgh	0.6	Wilmington	0.9	Louisville	1.6
Akron	0.7†	Dayton	1.0*	Portland	1.6
Denver	0.7	Duluth	1.0	Oakland	1.7†
St. Louis	0.7	Kansas City, Mo.	1.0		

Second Rank: from 2.0 to 4.9 (Fifteen Cities)

Columbus	2.0†	Camden	2.5†	Dallas	2.9†
Waterbury	2.0	Oklahoma City	2.5	San Antonio	3.5†
Des Moines	2.1	Washington	2.6	Birmingham	4.0†
Houston	2.2	Richmond	2.7	Atlanta	4.6†
Chattanooga	2.4	Miami	2.8†	Evansville	4.7

Third Rank: from 5.0 to 7.5 (Seven Cities)

Memphis	5.0†	Tampa	6.6	New Orleans	7.4†
Knoxville	5.4†	Nashville	7.0†	El Paso	7.8†
Norfolk	5.4				

* All the typhoid deaths reported were stated to be in nonresidents.
† One third or more of the reported typhoid deaths were stated to be in nonresidents.

1935 is for the first time under 1.0. Two of the nine cities, Omaha and Wichita, report no typhoid deaths in 1935, Wichita's being the second successive clear record and the fifth one in its history. Des Moines, after its abrupt rise in 1934, subsides to its 1933 level, but its typhoid mortality still ranks as the highest in the group.

The West South Central cities in 1935 showed a conspicuous improvement, with the lowest group rate (3.82) they have ever attained. These cities had only

TABLE 10.—*Number of Cities with Various Typhoid Death Rates*

	No. of Cities	10.0 and Over	5.0 to 9.9	2.0 to 4.9	1.0 to 1.9	0.1 to 0.9	0.0
1910-1910	77	75	2	0	0	0	0
1911-1915	70	58	10	2	0	0	0
1916-1920	64	32	22	10	0	0	0
1921-1925	69	12	17	25	12	0	0
1926-1930	68	3	10	20	27	10	0
1931-1935	68	0	0	17	23	42	0
1930	68	2	6	20	23	22	10
1931	68	2	6	23	20	22	11
1932	68	1	7	15	20	20	14
1933	68	0	7	16	19	23	16
1934	68	0	9	11	17	23	23
1935	68	0	7	15	15	20	24

seventy-four typhoid deaths in 1935 as against 105 and 106 respectively in the two preceding years. With the single exception of El Paso, all the cities had lower rates in 1935 than in 1934. Tulsa continues to have the lowest rate in the group, as it has had every year beginning with 1930, and its 1935 rate (0.7) is definitely lower than the abrupt increase shown in 1934.

Two cities in this group, New Orleans and El Paso, had the highest rates in the country (7.4 and 7.6), as shown in table 9. Less improvement in this group than in the East South Central cities is shown also in the quinquennial average.

The cities in the Mountain and Pacific states (table 8) had a slight increase in typhoid mortality in 1935 as compared with 1934 (thirty-five deaths as against thirty) and for the first time since 1929 the decline in the group rate was halted. In 1935 three cities in this group record no typhoid deaths as against two in 1934. For Tacoma it is the second successive year of freedom from typhoid mortality and the third in its history. Long Beach had no typhoid deaths in 1935 or in 1931 or 1932. San Diego, which has a clear record in 1935, had no typhoid deaths also in 1930. Denver and Spokane have both improved their position in the group and San Francisco, while not equaling its remarkable record of 0.1 for 1933 and 1934, still makes an excellent showing (0.8), two of its five typhoid deaths being reported as in nonresidents.

TABLE 11.—*Total Typhoid Rate for Seventy-Eight Cities, 1910-1934* *

	Population	Typhoid Deaths	Typhoid Death Rate per 100,000
1910	22,573,435	4,687	20.84
1911	23,211,341	3,950	17.02
1912	23,833,350	2,132	13.14
1913	24,457,999	3,285	13.43
1914	25,091,112	2,781	11.08
1915	25,713,346	2,434	9.47
1916	26,257,530	2,191	8.34
1917	26,985,408	2,016	7.50
1918	27,686,626†	1,884†	6.73
19 9	27,735,063†	1,154†	4.15
1920	28,344,670	1,099	3.85
1921	29,059,682	1,141	3.95
1922	29,473,246	923	3.20
1923	30,087,439	959	3.16
1924	30,701,614	982	3.07
1925	31,315,586	1,079	3.44
1926	31,929,782	897	2.84
1927	32,543,986	686	1.99
1928	33,158,150	628	1.80
1929	33,772,324	537	1.59
1930	34,386,717	554	1.61
1931	35,137,915	501	1.46
1932	35,691,815	442	1.24
1933	35,691,815	423	1.18
1934	35,691,715	413	1.17
1935	35,691,715	348	0.98‡

* The following fifteen cities are omitted from this table because data for the full period are not available: Canton, Chattanooga, Dallas, Fort Wayne, Jacksonville, Knoxville, Long Beach, Miami, Oklahoma City, South Bend, Tampa, Tulsa, Utica, Wichita, Wilmington.

† Data for Fort Worth lacking.

‡ The rate for the ninety-three cities in 1935 is 1.03 (total population 37,837,812, typhoid deaths 385), whereas in 1930 it was 1.84, and in 1932 and 1934 it was 1.24 and 1.25, respectively. The 1931-1935 average for the ninety-three cities is 1.31.

TABLE 12.—*Total Typhoid Death Rate per Hundred Thousand of Population for Ninety-Three Cities According to Geographic Divisions*

	(1933) Population	Typhoid Deaths 1935	1934	Typhoid Death Rates 1935	1934	1933	1931-1935	1926-1930	1925
New England	8,624,885	13	14	0.49	0.53	0.65	0.70	1.31	2.48
Middle Atlantic	12,032,200	72	82	0.55	0.63	0.76	0.80	1.40	2.97
South Atlantic	3,387,307	61	50	1.58	1.11	1.31	2.70	4.50	7.01*
East North Central	9,645,160	56	66	0.60	0.91	0.55	0.75	1.39†	2.32†
East South Central	1,342,600	49	61	3.94	4.91	4.81	5.31	13.09	
West North Central	2,704,300	23	40	0.85	1.48	1.51	1.24	1.83	3.43
West South Central	1,854,600	74	105	3.92	5.43	5.49	5.38	7.32‡	13.06‡
Mountain and Pacific	3,626,600	33	20	0.86	0.75	0.82	0.88	1.80	2.33

* Lacks data for Jacksonville and Miami.

† Data for South Bend for 1925-1930 are not available.

‡ Lacks data for Oklahoma City in 1926.

§ Lacks data for Oklahoma City.

Of the thirteen cities in the country with more than 500,000 population, all but Baltimore had 1935 typhoid rates below 1.0. Twenty-four cities had no typhoid deaths at all in 1934, the largest number with a perfect score yet reported. Six of these were New England cities and seven Middle Atlantic. Eleven of the twenty-four cities had had no typhoid deaths in 1934 and two of them (Elizabeth and Grand Rapids) have had no typhoid deaths in four years.

Eight cities (five of them in New England) had no deaths from either typhoid or diphtheria in 1935 (Bridgeport, Cambridge, Erie, New Bedford, New Haven, Scranton, Springfield, Tacoma). It is the second successive year that New Haven has had a clear record for both diseases, a record equaling that of Elizabeth for 1933 and 1934.

There are twenty-two cities in 1935 with rates of 2.0 or over (table 9, second and third ranks) as against twenty in 1934. The highest typhoid rate reported in any city is for the first time below 8.0. Of the twenty-two cities with 1935 rates of 2.0 and over, five are Northern cities (Camden, Columbus, Evansville, Des Moines, Waterbury).

The total of typhoid deaths for the ninety-three cities is notably less in 1935 than in 1934 (385 as against 470). For the seventy-eight cities for which we have complete data since 1910 (table 11) the 1935 total of typhoid deaths is 348, as compared with 413 for the preceding year and the typhoid rate 0.98 as against 1.17.

In six of the eight geographic divisions of the country there were fewer typhoid deaths in 1935 than in 1934, slight increases occurring in the South Atlantic and the Mountain and Pacific groups. For the first time five of the eight groups registered rates below 1.0, and all are below 4.0.

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Council on Physical Therapy

THE COUNCIL ON PHYSICAL THERAPY HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORTS. HOWARD A. CARTER, Secretary.

PAVAEX UNIT ACCEPTABLE
(Passive Vascular Exerciser)

Manufacturer: Taylor Instrument Companies, Rochester, N. Y.

Distributor: Cincinnati Scientific Company, Cincinnati.

This apparatus is recommended by the firm for the administration of suction-pressure therapy, particularly in the treatment of peripheral vascular diseases.

The motor for this unit is enclosed in a rectangular case, about 3 feet high, mounted on casters. A supporting carriage is available. On one side is the control panel for regulating the positive and negative pressures and the frequency of rate of adjustment. At one end is the rubber tube leading to the boot and the plug for the electric cord.

The "boot" is of heavy "Pyrex" glass and is fitted with a manometer for measuring both positive and negative pressure and a tube to connect with the motor. Three sizes of rubber cuffs are supplied, which establish a relatively air-tight joint between the patient and the boot. The cuff is joined to the boot by a metal connection about 6 inches long, and the mechanism by which the cuff and the boot are connected is simple and apparently satisfactory.

This apparatus was investigated in a clinic acceptable to the Council. The investigator reported that the mechanical performance of the unit was satisfactory, that it brings about the alternations of suction and pressure in the boot in the manner claimed, and that it is of therapeutic value in certain cases of vascular disease.

Some indications for the use of this type of apparatus appear to be acute vascular occlusion, freezing, and vascular diseases with major involvement of the large vessels. Contraindications appear to be thrombophlebitis, cellulitis or lymphangitis (acute or subacute); extensive destruction of the arteriolar or capillary vessels, advanced thrombo-angiitis obliterans with capillary stasis, and advanced arteriolar sclerosis with capillary stasis, and venous thrombosis.

Pavaex Unit.

This apparatus has a very limited field of usefulness and probably therefore does not belong in the armamentarium of the average physician. It belongs more in the realm of hospital equipment, since most of these rare arterial diseases are hospital cases.

In view of the satisfactory performance of this unit with reference to the treatment of acute vascular occlusion, freezing and vascular diseases with major involvement of the large vessels, the Council on Physical Therapy voted to include the Pavaex Unit (Passive Vascular Exerciser) in its list of accepted devices.

McKESSON OXYGEN TENT ACCEPTABLE

Manufacturer: McKesson Appliance Company, Toledo, Ohio.

The manufacturer recommends this oxygen tent for use in the treatment of pneumonia, cardiac disease, asphyxia, following brain and chest injuries from restricted breathing, and asphyxia neonatorum.

The tent proper has a capacity of 15 cubic feet and is equipped with four large noninflammable windows. The tent will fold for transportation and storage. It is adjustable in height and can be transported in an automobile. The ice chamber has a capacity of 50 pounds and the sides have one-inch insulation. The dimensions are 14½ by 20¾ by 30½ inches.

The blower is driven by a 110 volt universal variable speed motor, which is controlled by a rheostat. The capacity of the blower is 100 cubic feet free air per minute. The unit is equipped with an oxygen meter and oxygen regulator, together with a safety light which gives a warning that the oxygen is about exhausted. The entire unit is finished in green lacquer trimmed with chromium metal plated parts. The shipping weight is about 205 pounds. The unit is not equipped with a gas tank.

McKesson Oxygen Tent.

The unit seems to be well constructed and convenient to operate. The fabric is lightweight material, which allows some light to pass through to the patient. The double slide fastener opening permits easy access to care for the patient. The temperature is readily controlled and the humidity may be kept below the levels required. The soda lime is in a built-in container, and the carbon dioxide may be kept below 2 per cent with a moderate amount of soda lime changed once daily. The oxygen control of 55 to 60 per cent readily maintained depends on the amount of necessary handling of the patient. In the use of any type of oxygen tent the Council strongly urges the use of the gas analysis instrument for determining oxygen and carbon dioxide.

In a clinic acceptable to the Council, the unit was tested. The investigation substantiated the physical and therapeutic claims made by the manufacturer.

In view of the satisfactory performance of the unit, the Council on Physical Therapy voted to include the McKesson Oxygen Tent in its list of accepted apparatus.

Committee on Foods

ACCEPTED FOODS

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ANCHOR BRAND OLEOMARGARINE
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MAYFLOWER BRAND OLEOMARGARINE
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WISCONSIN MAID BRAND OLEOMARGARINE

(CONTAIN 0.1 PER CENT OF SODIUM BENZOATE)

Manufacturer.—The Cudahy Packing Company, Chicago.

Description.—Margarine prepared from hydrogenated, refined oleo oil and cottonseed oil, pasteurized cultured skim milk and salt. Contains 0.1 per cent of sodium benzoate.

Manufacture.—The mixture of hydrogenated fats is heated to 49 C. and churned with pasteurized, cultured skim milk and salt. The resulting emulsion is solidified by chilling, again churned with additional salt, refrigerated, molded into prints and automatically wrapped and packed in cartons.

Analysis (submitted by manufacturer).—

	per cent
Moisture	13.6
Total solids	86.4
Ash	3.5
Sodium chloride	3.5
Fat (ether extract)	81.9
Protein (N × 6.25)	0.3
Carbohydrates other than crude fiber (by difference)	0.7

Calories.—7.4 per gram; 210 per ounce.

CELLU BRAND RHUBARB, WATER PACKED

Distributor.—Chicago Dietetic Supply House, Inc., Chicago.

Packer.—Geneva Preserving Company, Geneva, N. Y.

Description.—Canned rhubarb, packed in water.

Manufacture.—Selected rhubarb is harvested at the proper degree of maturity, trimmed, automatically cut into pieces, washed and filled into cans, which are filled with hot water, sealed and processed.

Analysis (submitted by distributor).—

	per cent
Moisture	94.8
Total solids	5.2
Ash	0.7
Fat (ether extract)	0.7
Protein (N × 6.25)	0.5
Crude fiber	1.0
Starch (diastase method)	1.9
Carbohydrates other than crude fiber (by difference)	2.3

Calories.—0.2 per gram; 6 per ounce.

Claims of Manufacturer.—Choice quality rhubarb packed without added sugar or salt. For use in special diets in which sugar or salt is proscribed or in quantitative diets of calculated composition.

STANDBY BRAND EVAPORATED MILK

Distributor.—Gamble-Robinson Company, Minneapolis.

Packers.—Manufacturers of accepted brands of evaporated milk.

Description.—Canned, sterilized, unsweetened, evaporated milk; the same as Van Camp's Evaporated Milk (THE JOURNAL, June 8, 1935, p. 2097).

LUSH'US BRAND EVAPORATED MILK

Distributor.—General Grocers Co-op. Corp., Chicago.

Packer.—Amboy Milk Products Co., Amboy, Ill.

Description.—Sterilized, unsweetened evaporated milk. The same as Amboy Brand Evaporated Milk (THE JOURNAL, May 7, 1932, p. 1655).

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SATURDAY, JUNE 6, 1936

THE LEUKOPENIC INDEX AND FOOD ALLERGY

The search for methods of identifying food allergy more accurate than the methods now in use, namely, tests of cutaneous sensitization, food diaries and exclusion diets, has led recently to the clinical study of the so-called leukopenic index described by Vaughan [1] in 1934. Allergic hypersensitivity to a food is considered to exist, according to this test, if ingestion of the food is followed by a significant fall in the total leukocyte count. A rise in the leukocyte count following ingestion of a food is said to indicate lack of allergic reaction to a food or normal "digestive leukocytosis." Although at first Vaughan [2] considered a fluctuation of 2,000 in the number of leukocytes per cubic millimeter of blood as within the limits of normal, subsequently he regarded a drop of more than 1,000 leukocytes as positive evidence of allergic response. Gay [3] has considered that if the number of leukocytes falls 200, 400, 600, 800 or more below the fasting average the drop is significant and that the foods which cause the drop are "incompatible." In his hands "the leukopenic index has proved to be an aid of unexpected reliability and accuracy, not only in determining the allergic state but in determining the actual allergens at fault."

Whether or not the ingestion of a certain food by a person sensitive to that food is followed by a drop in the total leukocyte count, careful routine laboratory methods of counting leukocytes show that normal fluctuations in the total leukocyte counts of normal persons in a fasting state are much greater than the fluctuations on which this test has been based. Thus Mauriac and Cabouat [4] demonstrated definite variations in the total leukocyte counts of normal persons when the counts were made at intervals of an hour. They also found fluctuations of as much as 3,000 leukocytes in fifteen minutes and predicted that if it were possible to examine the blood every minute the frequency and suddenness of the oscillations of the leukocyte count would be even more evident. Within a half hour they noted a change in leukocyte count from 12,300 to 6,500 per cubic millimeter of blood. Sabin, Cunningham, Doan and Kindwall [5] clearly demonstrated marked fluctuations in the total leukocyte count in the fasting, resting state when counts were made at intervals of fifteen minutes. Shaw [6] stated that the minimal variation between two counts made fifteen minutes apart, with the patient in the resting, fasting state, ranged from 32 per cent to 10 per cent, while the maximal variation ranged from 51 per cent to 19 per cent. Medlar [7] showed that the total leukocyte count of a normal person under carefully standardized conditions may vary 50 per cent in less than half an hour. When the total leukocyte count was taken at intervals of three minutes over a period of an hour, it varied from 4,300 to 7,600 per cubic millimeter of blood. When two other subjects were studied at intervals of five minutes for periods of one hour and of two hours, the total leukocyte count varied from 5,800 to 9,400 and from 5,300 to 8,300, respectively.

Ponder, Saslow and Schweizer [8] explained some of the fluctuations noted in the foregoing on the basis of the error inherent in the technic, believing that the chief source of error was imperfect distribution of cells in the counting chamber. They felt that had larger numbers of cells (approximately 800 cells, in both sides of two counting chambers) been counted in the experiments reported by Sabin, Cunningham, Doan and Kindwall, the fluctuations found would have been less striking. Although Jones, Stephens, Todd and Lawrence [9] felt that the variations in the total leukocyte count were small, they demonstrated fluctuations of 1,000 to 2,000 cells in counts made at successive intervals of fifteen minutes and a variation of as much as 3,100 in seventy-five minutes.

Simpson [10] concluded, "leukocyte counts of healthy people vary continually and show that definite changes may occur in them, not only in a quarter of an hour, but even in a minute." Washburn [11] has demonstrated hourly fluctuations in the total leukocyte count of normal infants at ages of from one day to twenty-four weeks.

1. Vaughan, W. T.: Food Allergens: III. The Leukopenic Index; Preliminary Report, J. Allergy **5**: 601 (Sept.) 1934.
2. Vaughan, W. T.: Further Studies on the Leukopenic Index in Food Allergy, J. Allergy **6**: 78 (Nov.) 1934.
3. Gay, L. P.: Gastro-Intestinal Allergy: IV. The Leukopenic Index as a Method of Specific Diagnosis of Allergens Causing Peptic Ulcer, J. A. M. A. **106**: 969 (March 21) 1936.
4. Mauriac, P., and Cabouat, P.: Contribution à l'étude des variations de la formule leucocytaire chez l'homme normal, Paris méd. **59**: 407 (May 21) 1921.
5. Sabin, Florence R.; Cunningham, R. S.; Doan, C. A., and Kindwall, J. A.: The Normal Rhythm of the White Blood Cells, Bull. Johns Hopkins Hosp. **37**: 14 (July) 1925.
6. Shaw, A. F. B.: The Diurnal Tides of the Leukocytes of Man, J. Path. & Bact. **30**: 1 (Jan.) 1927.
7. Medlar, E. M.: The Extent of the Variations in the Leukocytes of Normal Individuals, Am. J. M. Sc. **177**: 72 (Jan.) 1929.
8. Ponder, Eric; Saslow, George, and Schweizer, Malvina: On Variations in the White Cell Count of Man, Quart. J. Exper. Physiol. **21**: 21 (April) 1931.
9. Jones, Edgar; Stephens, D. J.; Todd, Harriett, and Lawrence, J. S.: Studies in the Normal Human White Blood Cell Picture: I. Variations in Recumbent Basal Subjects and in Individuals with Change of Posture, Am. J. Physiol. **106**: 547 (Sept.) 1933.
10. Simpson, R. H.: Physiological Leukocyte Counts and the Detection of Small Deviations from the Normal, Brit. J. Radiol. **6**: 705 (Dec.) 1933.
11. Washburn, A. H.: Blood Cells in Healthy Young Infants: III. A Study of 608 Differential Leukocyte Counts, with a Final Report of 908 Total Leukocyte Counts, Am. J. Dis. Child. **50**: 413 (Aug.) 1935.

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Total leukocyte counts made in an exacting manner on the blood of normal persons seem therefore to be subject to considerable fluctuation. The admonitions of Mauriac and Cabouat in 1921 and of Simpson in 1933 to the effect that it is necessary to be cautious in attributing these fluctuations to any specific cause are still timely. Final decision on the value of the leukopenic index in diagnosis of food allergy might be hastened, therefore, if contributors on the subject would give detailed information as to the exact technic used, together with protocols of observations and counts sufficient for statistical analysis.

DR. JOHN GORRIE OF APALACHICOLA

One hundred years ago the major medical problems in Apalachicola, Florida, were malaria and yellow fever. Although the city was already one of the large cotton markets on the Gulf Coast, further development was retarded by the prevalence of these and other serious febrile diseases. Then John Gorrie,[1] a graduate of the College of Physicians and Surgeons in New York, came to Apalachicola in 1833 to practice medicine. After some years of clinical observation, he wrote a series of articles for the *Lancet* on "The Equilibrium of Temperature as a Cure of Pulmonary Consumption," and for the local paper on the prevention of malarial diseases. The *New Orleans Medical and Surgical Journal* summarized his work on the subject of fevers in 1855. Imbued with the idea that control of the fever itself was essential in the treatment of these diseases, Gorrie carried out many experiments to devise a method for the manufacture of ice, which was scarce in Apalachicola and which, when brought south from New England, sometimes cost a dollar a pound. Eventually he succeeded. The original model of his ice machine, now in the Smithsonian Institution in Washington, comprised essentially a pump with which to compress air in a chamber in which was a container filled with water. After being compressed, the air was permitted to expand rapidly, thereby absorbing heat from the water and so producing artificial ice. Gorrie's ideas were at first ridiculed, and he was unable to obtain financial backing to develop his machine. However, thirty years after he died, there was built in Apalachicola one of the first commercial ice factories in the world. Dr. John Gorrie is recognized today as the father of the artificial ice industry.

While his ideas on the prevention of fevers were not entirely in accord with more recent discoveries, Gorrie advocated the draining and filling of swamps to prevent fevers in the interest of public health. He had observed that persons who slept under nets rarely contracted the fever. Apparently he did not suspect that the effectiveness of the net was due to the simple fact that it kept mosquitoes from biting the person within. To apply the idea of controlling fever in the treatment of disease, he developed a unique method of ventilating the room by means of an opening in the wall at the floor level instead of using windows and doors. He would suspend from the ceiling of the sickroom a receptacle in which was placed a block of ice, and above it a hood with a pipe passing through the ceiling into the chimney. The ice at the ceiling cooled the air, which, being heavier, descended and passed out of the room through the opening at the floor. This arrangement produced a circulation of cooled air, which passed over the patient. With this method of ventilation in actual service, Gorrie became the father of modern air conditioning as a method for the treatment and prevention of certain diseases.

Dr. Gorrie spent his entire personal fortune in attempting to develop his methods and died without realizing that he would some day be regarded as a great benefactor of mankind. He was also a public servant in other capacities, having been chairman of the council, treasurer, postmaster and mayor of Apalachicola. The state of Florida long since recognized his greatness when it placed his statue in the Hall of Fame in the Capitol in Washington. John Gorrie belongs also in that medical hall of fame which includes such other general practitioners of medicine as Koch, Jenner, McDowell, Sims and Long.

1. Taylor, H. M.: John Gorrie: Physician, Scientist, Inventor, South. M. J. 28: 1073 (Dec.) 1935.

HEREDITARY FACTOR IN OBESITY

Of the factors believed to be significant in producing obesity, heredity has received much attention. It is easy to impress on the mind of the layman the belief that normally he has little control over his body weight and that his hereditary tendencies are of prime importance in governing the build which he attains. One often hears of the tendency to remain thin or of the tendency to gain weight. It is also common to hear of the inability either to gain or to lose weight by increasing or decreasing the food intake. This belief that appetite and energy intake were secondary in importance to the hereditary or "tendency" factor in weight regulation early received considerable support from the investigations of Grafe and his associates.[1] These investigators believed that the fasting, resting metabolism is significantly affected by the caloric value of the food previously ingested. According to this hypothesis, normal animals, including man, maintain a constant weight, almost without regard to the energy intake, by alteration of the metabolism in accordance with the caloric value of the food. Obesity becomes, therefore, nothing more than the failure of this alleged metabolism-regulating mechanism to respond normally to the stimulus of food. Furthermore, leanness may then be attributed to an over-response to a normal stimulus. The magnitude of these responses appeared to be related to a "tendency" factor.

1. Grafe, E., and Graham, D.: Ztschr. f. physiol. Chem. 78: 1, 1911.

Wiley and Newburgh[2] have clearly demonstrated that the hypothesis of Grafe is based on a fallacious analysis of experimental data. In the normal person the body weight is affected by the individual metabolic requirement and by the total intake of energy. When the food ingested provides an amount of energy less than the metabolic requirement, there will be an initial loss of weight and an adjustment of the rate of metabolism to a lower level. If the undernutrition is not too extreme, weight may be maintained after the initial loss. This appears to be an adaptation enabling the organism to prolong life despite the restricted food supply. The ingestion of a quantity of food in which the energy content exceeds the individual metabolic requirements will result in an increase in weight. Although a number of factors may influence the individual metabolic requirements, it seems apparent that the appetite mechanism functions to maintain a balance between the supply of energy and the metabolic demands.

Notwithstanding the experimental demonstration that the relationship existing between the caloric intake and metabolic requirement is of fundamental importance in regulating body weight, it seems likely that heredity indirectly plays more than a coincidental part. The emphasis which should be attributed to this factor, however, remains to be clearly established. Studies of the type reported by Gurney[3] from the University of Buffalo will aid in a statistical analysis of the importance of the hereditary factor in obesity. Seventy-five stout women were studied in the outpatient department of the Buffalo General Hospital with particular reference to three points: (1) the factors associated with the onset of obesity as compared with the same factors occurring in a not stout control group, (2) the incidence of obesity in the parents of the stout group as opposed to that in the parents of the not stout control group, and (3) the body build of the progeny of different matings with special reference to mendelian inheritance of build. Of sixty-three stout women who gave a reliable history of the onset of obesity, pregnancy or a major operative procedure appeared to be the most common factor associated with the initiation of the obese condition. However, in the control group of fifty-five women who were of approximately the same age group and who had approximately the same incidence of pregnancies and operation, obesity did not develop. Further study demonstrated that the incidence of obesity in the parents of the stout group was markedly greater than in the parents of the group of women who were not stout. A study of the progeny of different parents indicated a segregation which was taken as evidence for mendelian inheritance of build. Data of this type would seem to indicate that certain inconsistencies of build in persons subjected to the same environmental influence may be related to the hereditary factor. In its relation to the more important energy factors already discussed, the observations of Gurney may be interpreted as suggesting that the energy requirement of persons subjected to the same conditions may be modified by a hereditary influence of build. This is to be expected in view of the relationship existing between the surface area of a person and the fasting, resting metabolism.

2. Wiley, F. H., and Newburgh, L. H.: J. Clin. Investigation **10**: 723 (Oct.) 1931.

3. Gurney, Ramsdell: The Hereditary Factor in Obesity, Arch. Int. Med. **57**: 557 (March) 1936.

Current Comment

ESTROGENIC HORMONES AND SARCOMA IN MALE MICE

The interesting interrelationships among the estrogenic substances, the carcinogenic chemical compounds and the sterols, and the rôle of estrogenic substances in tumor formation, have been discussed in these columns.[1] Numerous studies have demonstrated unsuspected ramifications of these relationships; an additional aspect of this suggestive story has been revealed in a report from the Yale University School of Medicine.[2] It has been possible to produce sarcoma experimentally at the site of injection of estrogenic substances in five male mice from two different litters of a high tumor rate strain. Each animal was given by subcutaneous injection 10 rat units of theelin daily from sixty-eight to 102 days, followed by weekly injections of 500 international units of keto-estrin benzoate for periods of from twelve to twenty-five weeks. These sarcomas grew rapidly in the original mice and also following implantation into other mice of the same strain. Grafts made in one unrelated strain have failed to grow, although there was growth of grafts in some of the mice of each of two other distantly related strains and of another unrelated strain. Histologic examination of the primary tumors and grafts showed that these were spindle cell sarcomas in a state of active growth. Large multinucleated cells were obtained occasionally. Delicate capillaries were plentiful, and edematous areas occurred in the primary tumors with an associated leukocytic infiltration. There were some areas of necrosis in both the primary tumors and the grafts. The neoplastic tissues showed invasion of the surrounding normal tissues, but no metastases were observed. Although the specific response of the mammary epithelium to estrogenic hormone is now generally recognized, this newly observed development of sarcoma in subcutaneous tissue under the described experimental conditions is striking and suggestive. It seems possible that estrogenic hormone, under as yet ill defined conditions, may have a stimulating effect on mesodermal cells as well as on epithelium, the result being of sufficient extent to cause neoplasms in a manner already observed to be characteristic of the so-called carcinogenic substances.

1. Relationship Among the Sterols, Estrogenic Substances and Carcinogenic Compounds, editorial, J. A. M. A. **104**: 51 (Jan. 5) 1935. The Rôle of Estrogenic Substance in Tumor Formation, ibid. **106**: 1093 (March 28) 1936.

2. Gardner, W. U.; Smith, G. M.; Strong, L. C., and Allen, Edgar, Development of Sarcoma in Male Mice Receiving Estrogenic Hormones, Arch. Path. **21**: 504 (April) 1936.

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Medical Economics

FREEDOM OF CHOICE OF PHYSICIAN IN INDUSTRIAL MEDICINE

M. S. BLOOM, M.D.
BINGHAMTON, N. Y.

For nearly four years a plan of industrial medicine which provides complete freedom of choice of physicians has worked out successfully in Binghamton, N. Y. This plan, referred to widely as the "Spaulding plan," originated with Spaulding Bakeries, Inc., manufacturers of bakery products. It represents an industrial prepayment medical plan offering complete freedom of choice of physicians. Some facts concerning the plan, the philosophy back of its inception, and the procedure by which its principles are achieved, have been the subjects of previous articles published in THE JOURNAL.[1]

Since the publication of my last article, experience with the new plan in the business organizations now sponsoring it has been one of continued progress. There has been an increased accumulation of reserve funds, indicating the financial soundness of the basic principles on which it is organized. What is perhaps more important still, there has been no sign of letdown in the splendid spirit of cooperation and enthusiasm on the part alike of physicians, employees and employers. With almost four years of experience in this pioneer project, I am more convinced than ever that the plan is not only practicable, workable and highly desirable but necessarily the mean between the extremes of complete and uncompromising laissez faire and an equally complete and uncompromising state medicine.

Dr. Willard J. Denno, general medical director of the Standard Oil Company of New Jersey, writes:

"As you probably know, we have been interested for a long time in the problem of obtaining for the low-salaried groups of this company a moderate priced medical service which would at the same time be of high quality.

"In 1923, we assisted our employees at Baton Rouge in starting a mutual benefit association which has proved extremely successful from the standpoint of the group involved. It has the disadvantage, however, of not permitting free choice of physicians, as this association employed only full-time doctors (surgeons, internists, specialists, etc.) and thus antagonized the local medical profession. I soon came to realize that, if anything constructive was to be accomplished that would be generally acceptable to the medical profession and at the same time provide high grade service for the lower salaried groups, it would be necessary to encourage the free choice of physicians as one of the basic tenets of the plan. The organization that you have evolved meets these requirements and meets them better than any other plan that I have studied. It was for this reason that I arranged for my associate Dr. Schoenleber to visit you and discuss the details of your organization, with the result that we determined to adopt the general principles of your plan. Our company is now offering to its employees the opportunity to organize a mutual benefit association (based on the principles of the Spaulding plan) and the full cooperation of our medical department is at the service of any such groups as may wish to avail themselves of our advice."

Another official of the same company writes that some such project as freedom of choice might "point the direction in which this type of security program should go rather than the state medicine route European countries are following."

The Commission of Medical Economics of Kings County, N. Y., approves the Spaulding plan, and Dr. Lewis A. Koch, chairman of the committee, in a letter makes the following interesting comments: "Our county society is actively engaged in an effort to bring about the transformation of the unacceptable plans now in force in two companies in New York. We are urging them to revise their plans to conform to the general outline that you have accomplished in Binghamton. I feel that the five counties of greater New York will demand that some plan similar to the Spaulding plan or the Workmen's Compensation Law must be made."

The head of a large chain store corporation writes that he thinks the plan is a "wonderful thing for any organization." The medical director of a large insurance company says: "This plan comes as near reaching the ideal of industrial medicine as any plan that I have heard of. It appears to meet the medical and surgical needs of the group and yet stays away from the various extremely objectionable paternalistic plans advocated and practiced by some large industrial groups."

My point is not to present a pleasing array of testimonials for this type of medical service but simply to take from my miscellaneous correspondence some views that have been spontaneously expressed with no thought of publication. The samples selected are representative, and more or less random, although by no means exhaustive.

Dr. J. L. Kinner, past president of the Chemung County Medical Society, Elmira, N. Y., where one of the divisions of the Spaulding Mutual Benefit Association operates, tells me that he has "taken pains to inquire from other doctors and from employees as to their opinions of the Spaulding plan, and," he continues, "in no single instance have I found an expression of dissatisfaction. I am personally of the opinion that a general application of this plan to industry will do much to solve many of the problems that exist in the care of the sick."

Dr. Charles S. Stevens, adviser of the Elmira Division of Spaulding's, states his experience as follows: "At various times throughout the past two years, I have deliberately talked about the plan with various Elmira physicians and not once have I heard a single complaint against the plan or the way in which it is being operated. Every single individual is more than satisfied with it, and very frequently I have heard the statement from physicians and surgeons that they wished other industrial corporations would adopt a similar proposition."

It may be assumed without elaboration that the employing sponsors approve the plan as advantageous to their organizations. There is a real financial cost involved, of course, but the employers feel that, if they can help to free the minds of their workers from the bothersome thoughts of doctor bills and hospital costs during illness, this cost is productive. There is something more than the economic consideration in the background, for in every instance the organizations sponsoring the plan feel that they are providing a definite service, something ordinarily out of the reach of the rank and file of the average industrial employee. Call it what you will, the fact remains that the employer is doing a genuine service for the individuals on his payroll, for the community and for society.

As indicated, the original venture in freedom of choice was with the Spaulding Bakeries, Inc., at their Binghamton plant. From that plant the services were extended to plants in Elmira, Oneonta and Wilkes-Barre. A division is now in the process of organization at Middletown, N. Y., in the Spaulding plant there. The principles and practices of the plan have also been extended to two other firms in Binghamton—the Agfa Ansco Corporation, manufacturers of cameras and photographic supplies, and Truitt Brothers, shoe manufacturers. In both organizations the plan is working out with splendid success.

Perhaps the feeling in general of the employee toward the plan can best be indicated by quoting from a letter which I received not long ago. It is typical of the reaction I am constantly receiving from workers with whom I come in contact:

"While I was recovering from my recent operation I have had a great deal of time to think about the benefits I have obtained from our mutual benefit association. It would have been practically impossible for me to have had any operation unless I went as a charity patient.

1. Bloom, M. S.: A New Experiment in Industrial Medicine, J. A. M. A. 100:1869 (June 10) 1933; Successful Industrial Group Practice, ibid. 103:1155 (Oct. 13) 1934.

"Two years ago I had an operation and we would be still paying for it if it were not for the mutual benefit association. In the two and a half years that I have been in the association I have paid in about $30. I have had benefits which would have totaled nearly $700 or $800 if I had been forced to pay for them. It would have meant one of two things—first, an enormous bill which would have taken an indefinite time to pay and also have been a burden that we could not have carried with our present earnings, and, second, my going to the hospital as a charity case, which would have meant embarrassment for both my husband and myself.

"For these reasons I cannot see how any one employed where they have a benefit association can afford to be without the protection which the association gives."

Group medicine, without doubt, is more extensively practiced in the Binghamton area than in any other area in this country. There are, according to the local chamber of commerce, 25,926 industrial workers in the district. All but 5,000 of these participate in some form of industrial medicine—represented by contract, freedom of choice, or something in between. There are probably at least 10,000 more persons gainfully employed. So that out of a community of approximately 35,000 employed persons more than half of them are protected by industrial medicine. This fact takes on significance, I believe, as I get to the next point.

The Binghamton City Hospital is one of the hospitals which is used by the members of these medical service plans. Nearly one half of the employed persons work for one large shoe company, which hospitalizes its cases at another institution. The current report of the Binghamton City Hospital indicates that the number of free cases has increased from 35 per cent of all cases in 1927 to 56 per cent in 1935. In 1930 the free operation represented 25 per cent of all cases, and in 1935 48 per cent. The point is, then, that in a community which certainly has done a tremendous amount of work to relieve the problem of medical care still only 44 per cent of the cases entering the leading hospital are paid cases. This in spite of the fact that the area has probably suffered much less from the depression than most industrial areas in this country.

The Broome County Medical Society, in whose jurisdiction the Spaulding plan operates, has gone into the question of prepayment medical insurance by recently adopting a resolution favoring the prepayment plan of medical care. This decision was reached largely on the basis of the successful and satisfactory operation of the Spaulding plan. Here again there will doubtless be still a further vehicle of experimentation in freedom of choice in group medicine as soon as a plan can be worked out in detail. If the medical society can work out a suitable plan, using the experience directly at hand, for the community at large or some segment of it, it would seem that the profession is proceeding in the direction of at least a partially intelligent solution of the dilemma of medical care.

The principles on which modern medicine is founded were given a very satisfactory day in court last summer in the state of New York. The new Workmen's Compensation Law for that state calls for complete freedom of choice on the part of the employee. Group practice of whatever type or kind must begin with freedom of choice if the patient is to be given all that modern medical science is capable of giving, and if the personal doctor-patient relationship is to be retained.

And so it is that progress is being made definitely, along progressive lines, and in the interest of the doctor, the patient and the community.

Getting back to the specific plan, it should be of considerable interest to classify the expenditures made by business organizations operating under the Spaulding plan. We present the classification of expenditures in percentages. These are for physicians, sick relief, hospitalization and dentists. (Dental features are provided by only one of the Spaulding divisions and include only x-ray examinations and extractions.)

These percentages, given in the accompanying table, provide a dependable guide in estimating what the relative expenditures might be under a similar plan, and will help others who have a part in running any organization for medical service.

When a mutual benefit group of this nature is organized the medical profession in the given community is taken into full confidence and given the privilege of accepting or rejecting any or all provisions. The question of arriving at satisfactory fees has never been a difficult one and has always been adjusted to the satisfaction of the community physicians. The local societies have accepted the fee basis of $100 for major operations. Fees for minor operations follow the general fee tables of the community. Prevailing fees for house and office calls are respected. Specialists whose fees are above the prevailing rates are paid the regular or general fee by the group, and the difference, if there is one, is borne by the patient.

There is no limit whatever to the amount of money that may be paid to any one physician. Limits would not be practicable under this plan, for absolute freedom of choice is maintained at all times. The amount of work the physician gets depends on his reputation as a doctor, just as it does in regular practice. Our records show, however, interestingly enough, that the work is widely distributed, probably on the natural and normal basis of the general community practice.

Percentages of Expenditures Under the Plan

Firm	Dates	Physicians	Sick Relief	Hospitals	Dentists
Spaulding's Binghamton	4/1/33- 4/1/34	73.2	10.7	8.2	7.9
	4/1/34- 4/1/35	68.2	12.3	12.8	7.7
	4/1/34- 4/1/35	71.0	11.0	8.2	9.8
Three year average		70.1	11.3	10.1	8.4
Elmira	1/1/34- 1/1/35	67.7	8.8	22.5	
	1/1/35- 1/1/36	82.9	4.6	12.4	
Two year average		74.8	6.7	18.4	
Oneonta	11/1/34-11/1/35	73.0	5.2	21.8	
Wilkes-Barre	1/1/35- 1/1/36	67.5	3.3	29.2	
Agfa Ansco Corporation	4/1/33- 4/1/35	68.8	20.5	15.7	
	4/1/34- 4/1/36	75.8	11.5	12.7	
Two year average		69.8	16.0	14.2	
Truitt Brothers	5/1/34- 5/1/35	68.1	24.8	7.1	

Although there are no limits to expenditures to any one physician, there are definite, though very liberal, limits set for expenditures for members. For instance, a limit of $50 is placed for office and house calls for any one member. Hospital costs per member are limited to $3 per day for any thirty days in a given year. Not more than $350 total may be expended for any one member during a year. The last limit is set by the state law for organizations not incorporated.

Expenditures for eyeglasses, crutches, splints and the like are paid for by the patient, although the benefit association provides for refractions, consultations, x-ray examinations and laboratory services. The fact that all the limits are liberal is borne out by the condition that very seldom indeed does any one reach the prescribed maximum limits.

The plan is financially sound. A splendid reserve is continuously accumulating to provide against unpredictable epidemics of disease. When it is felt that the reserve is sufficiently large to take care of any risks likely to arise, additional services for members will be incorporated in the plan.

Whatever changes come should fit into the needs and philosophy of the physician, and whatever plans are developed should be in his hands. The physician has complete freedom under the Spaulding plan, the feasibility of which has been proved over a period of four years, and in an adequate number of diversified industries. This plan seems to be an intelligent approach to the needs of employed groups, and, with certain limitations, it should be possible for county medical societies in general to sponsor such a plan for entire communities.

110 Oak Street.

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PROCEEDINGS OF THE KANSAS CITY SESSION

MINUTES OF THE EIGHTY-SEVENTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT KANSAS CITY, MAY 11-15, 1936

(Concluded from page 1924, volume 106)

MINUTES OF THE SECTIONS

SECTION ON PRACTICE OF MEDICINE

WEDNESDAY, MAY 13—MORNING

The meeting was called to order at 9:05 by the chairman, Dr. William J. Kerr, San Francisco.

Dr. Walter L. Bierring, Des Moines, Iowa, in outlining the organization of the American Board of Internal Medicine, commented as follows: That in accordance with a resolution adopted in 1935, the chairman of the Section on Practice of Medicine appointed a committee consisting of Drs. Reginald Fitz of Boston, Ernest E. Irons of Chicago, John H. Musser of New Orleans and Walter L. Bierring, chairman, to act in conjunction with a committee from the American College of Physicians in the authorization of a certifying board for internists in the organization. This committee met in conjunction with the committee from the American College of Physicians, consisting of Dr. J. A. Bauer of St. Louis; Dr. J. C. Meakins, representing the Canadian medical group; Dr. W. S. Middleton of Wisconsin; Dr. Pepper of Philadelphia, and Dr. G. G. Richards of Salt Lake City. A definite plan of organization has been developed in the form of articles of incorporation which constitute the constitution and by-laws of the American Board of Internal Medicine, which have been approved by the Executive Committee of the Advisory Board for Specialties, the Council on Medical Education and Hospitals and the General Advisory Board for Medical Specialties. Dr. Bierring also informed the section that the American College of Physicians was underwriting the American Board of Internal Medicine until such time as it becomes self supporting.

It was moved by Dr. Bierring, on behalf of the committee, that the Section on Practice of Medicine approve the organization of the American Board of Internal Medicine, which motion was duly seconded.

Dr. James Alexander Miller, New York, president of the American College of Physicians, made some brief remarks, concerning the American Board of Internal Medicine, following which the motion that the Section on Practice of Medicine approve the organization of this board was put to a vote and carried.

Drs. Wallace M. Yater and Laurence S. Otell, Washington, D. C., presented a paper on "Hepatosplenography by Means of Stabilized Thorium Dioxide Sol." Discussed by Dr. Leo G. Rigler, Minneapolis.

Drs. Edward F. Bland, T. Duckett Jones and Paul D. White, Boston, presented a paper on "The Regression and Disappearance of the Signs of Rheumatic Heart Disease." Discussed by Drs. Fred M. Smith, Iowa City; P. T. Bohan, Kansas City, Mo.; William J. Kerr, San Francisco, and T. Duckett Jones, Boston.

Dr. Walter L. Bierring, Past President of the American Medical Association, introduced the Frank Billings lecturer for this year, Dr. George Blumer, New Haven, Conn., who read a paper on "Pericarditis Epistenocardica."

Drs. A. V. Hardy, Baltimore; C. F. Jordan, Des Moines, Iowa, and I. H. Borts, Iowa City, presented a paper on "Undulant Fever: Further Clinical and Epidemiologic Observations in Iowa." Discussed by Drs. Fred E. Angle, Kansas City, Kan.; Walter L. Bierring, Des Moines, Iowa; William J. Kerr, San Francisco, and A. V. Hardy, Baltimore.

Dr. H. A. Reimann, Minneapolis, read a paper on "Habitual Hyperthermia." Discussed by Drs. A. C. Ernstene, Cleveland, and Russell M. Wilder, Rochester, Minn.

Dr. Alvan L. Barach, New York, read a paper on "Practical Therapeutic Aspects of Helium Therapy." Discussed by Drs. Francis M. Rackemann, Boston; C. K. Maytum, Rochester, Minn.; John D. Kernan, New York; Frank H. Lahey, Boston; William J. Kerr, San Francisco, and Alvan L. Barach, New York.

THURSDAY, MAY 14—MORNING

A joint meeting was held with the Section on Pharmacology and Therapeutics.

Dr. Soma Weiss, Boston, read a paper on "The Clinical Use and Dangers of Hypnotics." Discussed by Drs. Chauncey D. Leake, San Francisco, and Soma Weiss, Boston.

Dr. William J. Kerr, San Francisco, read the chairman's address, entitled "The Common Cold."

Dr. Joseph M. Hayman Jr., Cleveland, read a paper on "The Clinical Use of Diuretics."

Dr. Stafford L. Warren, Rochester, N. Y., read a paper on "Clinical Evaluation of Fever Therapy," which was followed by questions from the floor and answered by Dr. Warren.

Dr. W. M. James, Panama, C. Z., read a paper on "Notes on Treatment of Histolytica Infection in Man."

FRIDAY, MAY 15—MORNING

The following officers were elected: chairman, Dr. John H. Musser, New Orleans; vice chairman, Dr. Ralph H. Major, Kansas City, Mo.; secretary, Dr. Joseph T. Warren, Cleveland; executive committee: Dr. George R. Minot, Boston; Dr. William J. Kerr, San Francisco; Dr. John H. Musser, New Orleans; delegate, Dr. J. E. Paullin, Atlanta, Ga.; alternate, Dr. Ernest E. Irons, Chicago.

Drs. Norman Jolliffe and C. N. Colbert, New York, presented a paper on "The Etiology of Polyneuritis in the Alcoholic Addict."

Dr. M. A. Blankenhorn, Cincinnati, read a paper on "Oral Complications of Chronic Alcoholism: Significance, Diagnosis and Treatment."

These two papers were discussed by Drs. H. B. Mulholland, University, Va.; Tom Spies, Cincinnati; Norman Jolliffe, New York, and M. A. Blankenhorn, Cincinnati.

Dr. Stacy R. Mettier, San Francisco, read a paper on "Classification and Treatment of the Hemorrhagic States, with Special Reference to the Value of Roentgen Irradiation of the Spleen and Essential Thrombocytopenic Purpura Hemorrhagica." Discussed by Drs. E. B. Reed, Lincoln, Neb., and Stacy R. Mettier, San Francisco.

Drs. R. A. Woodbury, W. F. Hamilton and H. T. Harper Jr., Augusta, Ga., presented a paper on "Effect of Coughing, Straining, Forced Breathing on Arterial and Intrathoracic Pressure in Man." Discussed by Drs. Ralph H. Major, Kansas City, Mo., and R. A. Woodbury, Augusta, Ga.

Drs. John C. Sharpe and Richard H. Young, Omaha, presented a paper on "Von Recklinghausen's Neurofibromatosis: Unusual Clinical Manifestations in Sixteen Cases." Discussed by Drs. W. M. Ketcham, Kansas City, Mo.; J. J. Eller, New York, and Richard H. Young, Omaha.

Drs. R. H. Freyberg, R. L. Grant and M. A. Robb, Ann Arbor, Mich., presented a paper on "Hypoparathyroidism: The Treatment of Chronic Cases and an Explanation of 'Refractiveness' to Parathyroid Extract." Discussed by Drs. W. M. Ketcham, Kansas City, Mo.; William J. Kerr, San Francisco, and R. H. Freyberg, Ann Arbor, Mich.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

Wednesday, May 13—Morning

The meeting was called to order at 9 o'clock by the chairman, Dr. Howard M. Clute, Boston.

Dr. Herbert L. Johnson, Boston, read a paper on "Peritoneal Immunization." Discussed by Drs. Bernhard Steinberg, Toledo, Ohio; H. M. Trusler, Indianapolis; W. T. Coughlin, St. Louis, and Herbert L. Johnson, Boston.

Dr. Leon Goldman, San Francisco, read a paper on "Gross Hemorrhage in Peptic Ulcer: Its Morbidity, Mortality and Treatment." Discussed by Drs. Samuel L. Ledbetter Jr., Birmingham, Ala.; J. William Hinton, New York, and Leon Goldman, San Francisco.

Drs. Donald Guthrie, Sayre, Pa., and Robert F. Sharer, Oak Park, Ill., presented a paper on "Permanence of Cure Following Ruptured Duodenal Ulcers." Discussed by Drs. Harry Kerr, Washington, D. C.; Edwin G. Ramsdell, White Plains, N. Y.; W. T. Coughlin, St. Louis, and Robert F. Sharer, Oak Park, Ill.

Drs. Alton Ochsner and Ambrose H. Storck, New Orleans, presented a paper on "Treatment of Mechanical Ileus by Intestinal 'stripping': A Clinical and Experimental Study." Discussed by Drs. Willis D. Gatch, Indianapolis; Owen H. Wangensteen, Minneapolis, and Alton Ochsner, New Orleans.

Drs. R. Russell Best and N. Frederick Hicken, Omaha, presented a paper on "Cholangiographic Demonstration of Biliary Dyssynergia and Other Obstructive Lesions of the Gallbladder and Bile Ducts." Discussed by Drs. Frank H. Lahey, Boston, and Waltman Walters, Rochester, Minn.

Dr. Hugh H. Young, Baltimore, read a paper on "Imperforate Anus: Bowel Opening into Urethra: Hypospadias; Presentation of New Plastic Methods." Discussed by Dr. John R. Caulk, St. Louis.

Thursday, May 14—Morning

The chairman appointed Dr. Donald Guthrie, Sayre, Pa., to preside in the absence of the vice chairman, Dr. William F. Rienhoff, Baltimore.

Drs. Nelson W. Cornell and Alice R. Bernheim, New York, presented a paper on "The Apparent Influence of Hydrochloric Acid on Bone Growth in Fractures." Discussed by Drs. Harry Shay, Philadelphia; Mandell Shimberg, Leavenworth, Kan., and Nelson W. Cornell, New York.

Dr. Willard Bartlett Jr., St. Louis, read a paper on "Dynamic Tests in Thyrotoxicosis." Discussed by Drs. Evarts A. Graham, St. Louis; John Lucius McGehee, Memphis, Tenn., and Willard Bartlett Jr., St. Louis.

Dr. Roy D. McClure, Detroit, read a paper on "Hypoparathyroidism Following Operations for Hyperparathyroidism Due to Adenoma." Discussed by Drs. Frank H. Lahey, Boston; Brien T. King, Seattle, and Roy McClure, Detroit.

Dr. Howard M. Clute, Boston, read the chairman's address, entitled "The Problem of Cancer of the Pancreas."

Dr. Winchell McK. Craig, Rochester, Minn., read a paper on "Tumors of the Spinal Cord and Their Relation to Medicine and Surgery." Discussed by Drs. Ernest Sachs, St. Louis, and Winchell McK. Craig, Rochester, Minn.

Dr. Richard B. Cattell, Boston, read a paper on "Improvements in the Treatment of Cancer of the Rectum." Discussed by Drs. Fred W. Rankin, Lexington, Ky.; William D. Haggard, Nashville, Tenn., and Richard B. Cattell, Boston.

Friday, May 15—Morning

The following officers were elected: chairman, Dr. Robert S. Dinsmore Jr., Cleveland; vice chairman, Dr. Alton Ochsner, New Orleans.

Dr. Fred W. Rankin, Lexington, Ky., read the following report and moved that the section approve the action of its committee as expressed in the recommendations of the National Committee for the elevation of standards of practice of surgery and empower its chairman to appoint three members from this section to serve on the American Board of Surgery, and that the section recommend cooperation with the proposed joint council, which motion was seconded and carried:

At the Atlantic City meeting of the American Medical Association in June 1935 this section appointed a committee of five to cooperate with a committee appointed by the American Surgical Association to consider the elevation of standards of practice of surgery and to increase the hospital facilities for the training of young surgeons.

Your committee met with the other committees at the headquarters of the American College of Surgeons in Chicago, Oct. 23, 1935, under the chairmanship of Dr. Evarts Graham. A committee from the executive committee of the American College of Surgeons, consisting of Drs. Crile, Squire, Harvey, Abell and Crowell joined in this meeting. After prolonged discussion, the representatives of the American College of Surgeons agreed to cooperate in this movement to the extent of appointing six members to create a national committee of twenty-four to discuss ways and means of forming an organization for qualifying surgeons.

At a subsequent meeting February 15 and 16 this committee of twenty-four members met in Chicago. Representation was as follows: American Surgical Association, six; Section on Surgery, General and Abdominal, of the American Medical Association, six; Southern Surgical Association, two; Western Surgical Association, two; Pacific Surgical Association, two. This committee was divided into two committees: (1) to plan for the organization of an American Board of Surgery, and (2) to plan for increasing opportunities for training surgeons. These two committees submitted their reports to the joint committee and the reports were unanimously accepted.

The chairman of the National Committee was authorized to present a plan for creation of an American Board of Surgery to the Executive Committee of the Advisory Board for Medical Specialties. The plan was presented and approved by that body.

This plan proposes that the board consist of thirteen members, allocated as follows:

The American Surgical Association	3
The Section on Surgery, General and Abdominal	3
The American College of Surgeons	3
The Southern Surgical Association	1
The Western Surgical Association	1
The Pacific Coast Surgical Association	1
The New England Surgical Society	1
	13

It is proposed that a group of founders be selected to be qualified without examination consisting of the members of the above-mentioned societies eligible when the board begins to function and, in addition, within the first two years after the board begins to function, those who have limited their practice to surgery for fifteen years may make direct application to the board and with its approval be certified without examination.

Other candidates will be approved by the board after certain requirements have been fulfilled, one of which concerns special training.

For increasing the facilities of training of surgeons, it is recommended that the American College of Surgeons and the American Medical Association be asked to form a joint council to organize and carry out a program for the training of surgeons in proper qualified hospitals, setting up such standards as will meet the requirements of the proposed American Board of Surgery. The American Surgical Association approved the recommendations of its committee as to the formation of an American board and the recommendations of the joint council.

The Pacific Coast Surgical Association and the Executive Committee of the New England Surgical Society have approved in principle the recommendations which the National Committee has made. The American College of Surgeons has approved the recommendations to form a joint council.

It was regularly moved, seconded and carried that the chairman be authorized to appoint three members to cooperate with the National Board of Anesthetists and the Society of Regional

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Anesthetists in establishing a national board for certification in anesthesia and to report to the section at the meeting in 1937.

Dr. Frederick A. Coller, Ann Arbor, Mich., read a paper on "The Maintenance of Normal Water Exchange with Intravenous Fluids." Discussed by Drs. Thomas G. Orr, Kansas City, Mo., and Walter G. Maddock, Ann Arbor, Mich.

Dr. Daniel C. Elkin, Atlanta, Ga., read a paper on "Injuries of the Thoracic Viscera." Discussed by Drs. Frederick Christopher, Evanston, Ill., and L. Wallace Frank, Louisville, Ky.

Dr. Clarence E. Bird, Louisville, Ky., read a paper on "The Treatment of Large Pulmonary Abscesses: Report of Ten Cases." Discussed by Drs. Alfred Blalock, Nashville, Tenn.; P. B. Salatich, New Orleans, and Clarence E. Bird, Louisville, Ky.

Dr. George L. Stivers, Fall River, Mass., read a paper on "Indications and Limitations of Intrapleural Pneumolysis in Closing Pulmonary Tuberculous Cavitation." Discussed by Drs. Frank B. Berry, New York; Victor Strong Randolph, Phoenix, Ariz., and George L. Stivers, Fall River, Mass.

Dr. Earl C. Padgett, Kansas City, Mo., read a paper on "Skin Grafting After Extensive Epithelial Loss, with Special Reference to That Following Burns." Discussed by Drs. Gordon B. New, Rochester, Minn.; James B. Brown, St. Louis, and Earl C. Padgett, Kansas City, Mo.

Dr. Vilray Papin Blair, St. Louis, read a paper on "Plantar Warts, Flaps and Grafts." Discussed by Drs. Ellis Fischel, St. Louis; Joseph J. Eller, New York, and Vilray Papin Blair, St. Louis.

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

WEDNESDAY, MAY 13—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. Lyle G. McNeile, Los Angeles.

Dr. Frank H. Bethell, Ann Arbor, Mich., read a paper on "The Blood in Normal Pregnancy." Discussed by Drs. R. B. Schutz, Kansas City, Mo.; Adolph Sachs, Omaha, and Frank H. Bethell, Ann Arbor, Mich.

Dr. Louis Rudolph, Chicago, read a paper on "Constriction Ring Dystocia." Discussed by Drs. M. P. Rucker, Richmond, Va.; W. T. Pride, Memphis, Tenn.; Percy B. Russell Jr., Memphis, Tenn., and Louis Rudolph, Chicago.

Drs. Fred L. Adair, Chicago, and A. B. Hunt, Rochester, Minn., presented a paper on "Vascular Collapse in Toxemic Patients." Discussed by Drs. Ralph R. Wilson, Kansas City, Mo.; Robert D. Mussey, Rochester, Minn., and Fred L. Adair, Chicago.

Drs. Edward A. Schumann and Adrian W. Voegelin, Philadelphia, presented a paper on "Chorionepithelioma in Philadelphia." Discussed by Drs. P. F. Schneider, Evanston, Ill.; John Rock, Brookline, Mass.; William T. Black, Memphis, Tenn., and Edward A. Schumann, Philadelphia.

Dr. Lewis C. Scheffey, Philadelphia, read a paper on "Carcinoma of the Cervical Stump." Discussed by Drs. J. P. Pratt, Detroit; Henry Schmitz, Chicago; R. Q. Rowse, Sioux City, Iowa, and Lewis C. Scheffey, Philadelphia.

Dr. David R. Murphey Jr., Tampa, Fla., read a paper on "The Treatment of Carcinoma of the Cervix by the Combined Use of Relatively Small Amounts of Radium and High Voltage Roentgen Rays." Discussed by Drs. Fred J. Taussig, St. Louis, and David R. Murphey Jr., Tampa, Fla.

In the absence of Dr. James R. McCord, Atlanta, Ga., Dr. Jennings C. Litzenberg, Minneapolis, was appointed a member of the executive committee by the chairman.

THURSDAY, MAY 14—AFTERNOON

The following papers were read as a symposium on "Obstetric Analgesia":

Drs. Otto S. Krebs, George J. L. Wulff and Helman C. Wassermann, St. Louis: "Scopolamine-Morphine Seminarcosis with Modifications."

Drs. Charles E. Galloway, Robert M. Grier and Robert Blessing, Evanston, Ill.: "Three Years' Experience with Pentobarbital-Sodium and Scopolamine in Obstetrics at the Evanston Hospital."

Drs. Howard F. Kane and George B. Roth, Washington, D. C.: "Relief of Labor Pains by the Use of Paraldehyde and Benzyl Alcohol."

Dr. Gertrude Nielsen, Oklahoma City: "Analgesia in Labor Considered from the Points of View of Medicine and Psychology."

These four papers were discussed by Drs. Buford G. Hamilton, Kansas City, Mo.; Joseph B. De Lee, Chicago; J. L. Baer, Chicago; Rudolph W. Holmes, Chicago; Nicholas J. Eastman, Baltimore; George J. L. Wulff, St. Louis; Frederick V. Emmert, St. Louis; Percy B. Russell Jr., Memphis, Tenn.; S. Kendig Wallace, Baltimore; Otto S. Krebs, St. Louis; Robert M. Grier, Evanston, Ill.; Howard F. Kane, Washington, D. C., and Gertrude Nielsen, Oklahoma City.

Dr. Robert D. Mussey, Rochester, Minn., read the report of the Committee on Maternal Welfare, with the statement that the resolution contained therein would be acted on at the session on Friday:

Your Committee on Maternal Welfare is aware that you are not unfamiliar with the frequently quoted statistics on maternal mortality in this country which show approximately six maternal deaths per thousand live births. Comparison of statistical records of maternal mortality in the United States with those of other countries may lead to erroneous conclusions because of lack of a common basis or measuring stick for the collection of data. In this report we are not concerned with the records of other countries but rather with the necessity of continued effort in this country toward reducing the incidence of preventable obstetric morbidity and mortality.

Since the publication in 1906 by the United States Census Bureau of maternal and infant mortality statistics for the first five years in this century, there has been increasingly coordinated effort to lower maternal and infant mortality. Time does not permit mention of the admirable and time-consuming effort of many local and national organizations which produced a country-wide interest in maternal welfare and which led to the incorporation of the American Committee on Maternal Welfare in April 1934.

In the chairman's address before the meeting of the Committee on Maternal Welfare held at Atlantic City in June 1935, Dr. Fred L. Adair, Chicago, restated the object of the committee. In brief this is as follows:

The object of the American Committee on Maternal Welfare is to promote the interest of the medical profession in cooperation with public and private agencies for the improvement of maternal care and for the prevention of conditions which menace the life and safety of the mother and her offspring during pregnancy and labor and after confinement.

The program as outlined embraced:

1. Education of the public in the principles and practices of health and in the value of efficient antepartum and obstetric care.

2. Improvement and generalization of the standards and methods of training physicians, nurses and others dealing with problems of maternity.

3. The study and the promotion of study of the problems involved in maternal and infant health.

4. The publication and circularization of publications, especially those concerned with this program.

Since incorporation, various organizations in addition to those previously enumerated have been invited to identify themselves officially with this committee and to appoint a representative from their organization to represent it at the meeting. The organizations which are now represented are the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, the American Child Health Association, the American College of Surgeons, the American Gynecological Society, the American Hospital Association, the Section on Obstetrics, Gynecology and Abdominal Surgery of the American Medical

Association, the American Public Health Association, the Central Association of Obstetricians and Gynecologists, the Chicago Maternity Center, the Children's Bureau, U. S. Department of Labor, the Maternity Center Association of New York, the National Organization of Public Health Nursing, the Pacific Coast Society of Obstetrics and Gynecology and the Southern Medical Association.

The committee has sponsored the publication of pamphlets for physicians on Standards of Prenatal Care, on Intranatal or Delivery Care and on The Management of Preeclamptic Toxemia and Eclampsia, and a pamphlet on Standards of Postnatal Care is soon to be published. Believing that there should be a uniform standard for febrile maternal morbidity, the committee has defined it as a fever of 100.4 F. (38 C.) on any two of the first ten days post partum, exclusive of the first twenty-four hours. The temperature should be taken by mouth by the standard technic at least four times daily.

Since its incorporation, the committee has attempted to stimulate the formation of state committees on maternal welfare and their work is now in active progress. Some states already had committees functioning in this capacity, but most of them had not. One of two plans of procedure has been followed in the formation of these state committees. The first contemplated official action by the state medical societies in the formation of such a committee with the thought that each state committee would guide and direct the formation of local committees in each of the county or district societies of its state. This plan was preferred because it was felt that a maternal welfare program would in this way become an official part of the activities of the various state and local medical societies. In the states in which this plan does not appear to be feasible, the national committee has endeavored to secure the active interest of members of the medical profession in leading the activities in their state and in securing the appointment of the necessary local committees throughout that state. The national committee has felt that it should not in any way attempt to dictate the activities of these various committees. It does sincerely believe that such activities on the part of obstetricians and general practitioners are not only advisable but essential for the welfare of both the mother and her infant, on whom the future of the community rests.

Several obstetric and gynecologic organizations are considering the possibility of holding a national congress of obstetrics and gynecology in 1938 or 1939. This subject was brought to the attention of your committee by the American Committee on Maternal Welfare, which favors and is willing to sponsor and promote a National Congress of Obstetrics and Gynecology, if the various organizations interested in these specialties favor such a meeting. Your committee believes that this proposed congress would develop a community of interest and thought in obstetrics and gynecology which would greatly enhance the knowledge of these subjects. Therefore, this committee wishes to present to the Section of Obstetrics, Gynecology and Abdominal Surgery of the American Medical Association the following resolution:

Resolved, That the Section on Obstetrics, Gynecology and Abdominal Surgery of the American Medical Association favors and will participate in the plan of holding a National Congress of Obstetrics and Gynecology in 1938 or 1939, provided this congress is participated in by other representative groups of these specialties and that the promotion and arrangements for this congress be undertaken by a national organization such as the American Committee on Maternal Welfare.

Pertinent to this report is a résumé of the provisions relating to maternal welfare in the Social Security Act adopted by Congress and approved by the President on Aug. 14, 1935. Provisions of the act relating to maternal and child welfare are described under item V, "Grants to States for Maternal and Child Welfare." The purpose of federal grants in brief is to enable and assist each state to extend and improve, as far as is practicable under conditions in such state, services for promoting the health of mothers and children, especially in rural areas and in areas suffering from economic distress.

The federal administration of this part of the act is under the immediate direction of the Maternal and Child Health Division of the Children's Bureau, headed by a physician and receiving general supervision from the assistant chief of the Children's Bureau, who is also a physician.

Before any state plan is approved, certain requirements must have been accepted. Among the seven legal requirements for state plans are the following that directly affect the medical profession:

Administration of the plan or supervision of administration of the plan by the state health agency (which in every state is headed by a physician).

Extension and improvement of local maternal and child health services.

Cooperation of demonstration services in needy areas and among groups in special need.

The Advisory Committee of the Children's Bureau on maternal and child welfare services under the Social Security Act included the following obstetricians: Fred L. Adair, Chicago; Robert L. De Normandie, Boston; George W. Kosmak, New York; Lyle G. McNeile, Los Angeles; Everett D. Plass, Iowa City; Phillip Williams, Philadelphia, and James R. McCord, Atlanta, Ga.

The advice and suggestions of the advisory committees have in large part formed the basis for the acceptance by the Children's Bureau of plans of the states, which have conformed to the act and are now carrying out the program.

These advisory committees made the following suggestions with respect to state programs for maternal and child health at their meetings in December 1935:

1. That a division of maternal and child health, with a physician for director, be established under the state department of health in each state. (This has been done by every state whose plan has been approved—forty-one approved state plans on April 20, 1936.)

2. That additional state medical staff for consultation and advisory service should consist of full time or part time physicians with training and experience in either maternal or child health work, preferably both.

3. That there be regional advisers to professional groups in the fields of pediatrics, obstetrics and dentistry.

4. That the maternal and child health services by local or other qualified physicians should be arranged for jointly by the local health department and the local medical association with the advice of the director of the state division of maternal and child health.

5. That as far as possible the maternal and child health work in any given area should be carried by local and qualified physicians and, where such are not available, that other arrangements be made in local maternal and child health centers.

6. That medical men taking part in the program should be paid for their services.

7. That there should be cooperation of local and county medical organizations in the educational programs (local and state) to be carried out for professional and lay groups.

The state law under which the program arranged by the Minnesota Department of Health is being conducted may be cited as an example of what may be done under the provision of this act: "The Division of Child Hygiene of the Minnesota Department of Health is limited by state law to a program of an educational nature which automatically eliminates from the work of the division all activities which aim at clinical supervision and treatment or with giving material aid of any kind."

Dr. Lyle G. McNeile, Los Angeles, read the chairman's address, entitled "Trends in American Obstetrics During the First Third of This Century."

Drs. James R. Reinberger and Percy B. Russell Jr., Memphis, Tenn., presented a paper on "The Conservative Treatment of Abortion." Discussed by Drs. J. C. Litzenberg, Minneapolis; Thomas K. Brown, St. Louis; Channing W. Barrett, Chicago; Rudolph W. Holmes, Chicago; W. T. Pride, Memphis, Tenn.; Joseph B. De Lee, Chicago; Lyle G. McNeile, Los Angeles, and James R. Reinberger, Memphis, Tenn.

Friday, May 15—Afternoon

It was regularly moved, seconded and carried that the following resolution be adopted:

Resolved, That the Section on Obstetrics, Gynecology and Abdominal Surgery of the American Medical Association favors and will participate in the plan of holding a National Congress of Obstetrics and Gynecology

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in 1938 or 1939, provided this congress is participated in by other representative groups of these specialties and that the promotion and arrangements for this congress be undertaken by a national organization such as the American Committee on Maternal Welfare.

The secretary read the report of the executive committee, as follows:

The Committee met in the Municipal Auditorium May 13, 1936, at 5 o'clock. Present: Lyle G. McNeile, Los Angeles; Joseph B. De Lee, Chicago, and J. C. Litzenberg, Minneapolis, acting in place of J. R. McCord, Atlanta, Ga., and the secretary.

The committee agreed to nominate Dr. Fred J. Taussig, St. Louis, to the American College of Surgeons as a candidate for the board of governors of the college.

The committee considered the advisability of asking the House of Delegates to change the name of the section from the Section on Obstetrics, Gynecology and Abdominal Surgery to Section on Obstetrics and Gynecology, and instructed the secretary to prepare a resolution for presentation at this meeting. The resolution offered reads as follows:

Whereas, The Council on Medical Education and Hospitals has recently recognized Obstetrics and Gynecology as a specialty, and

Whereas, The Scientific Assembly provides adequately for the discussion of problems of abdominal surgery within the Section on Surgery; therefore be it

Resolved, That the Section on Obstetrics, Gynecology and Abdominal Surgery request the House of Delegates to change the name of the section to the Section on Obstetrics and Gynecology, and further be it

Resolved, That the Section on Obstetrics, Gynecology and Abdominal Surgery instruct its delegate to present this resolution to the House of Delegates at its regular meeting in 1937.

The Chairman, Dr. Lyle G. McNeile, announced appointment of the following Committee on Maternal Welfare: Dr. James R. Miller, Hartford, Conn.; Dr. Robert D. Mussey, Rochester, Minn., and Dr. William Benbow Thompson, Los Angeles.

It was regularly moved, seconded and carried that the resolution to change the name of the section to the Section on Obstetrics and Gynecology be adopted.

It was regularly moved, seconded and carried that the nomination of Dr. Fred J. Taussig, St. Louis, to the American College of Surgeons as a candidate for the board of governors of the college be confirmed.

The following officers were elected: chairman, Dr. M. Pierce Rucker, Richmond, Va.; vice chairman, Dr. Buford G. Hamilton, Kansas City, Mo.; secretary, Dr. Everett D. Plass, Iowa City, continued in office; delegate, Dr. George Gray Ward, New York; alternate, Dr. Jean P. Pratt, Detroit.

On motion made by Dr. H. C. Hesseltine, Chicago, and seconded, it was voted that the secretary express the appreciation of the members of the section to the Kansas City Society of Obstetrics and Gynecology for their gracious and exceptional courtesies and hospitalities.

Drs. John C. Burch, G. S. McClellan and Claud D. Johnson, Nashville, Tenn., presented a paper on "The Diagnosis and Classification of Menstrual Disturbances." Discussed by Drs. J. P. Pratt, Detroit; E. C. Hamblen, Durham, N. C., and John C. Burch, Nashville, Tenn.

Drs. Lawrence R. Wharton and Erle Henriksen, Baltimore, presented a paper on "The Operative Observations in Periodic Intermenstrual Pain." Discussed by Drs. J. P. Greenhill, Chicago; J. M. Singleton, Kansas City, Mo.; Cyrus W. Anderson, Denver, and Lawrence R. Wharton, Baltimore.

Drs. Preston T. Brown, Phoenix, Ariz., and Erwin von Graff, Des Moines, Iowa, presented a paper on "The Diagnosis of Ectopic Pregnancy." Discussed by Drs. Theodore H. Aschmann, Kansas City, Mo.; Walter T. Dannreuther, New York, and Erwin von Graff, Des Moines, Iowa.

Dr. William Benbow Thompson, Los Angeles, read a paper on "Cesarean Section in Los Angeles County." Discussed by Drs. Rudolph W. Holmes, Chicago; H. C. Hesseltine, Chicago; J. P. Greenhill, Chicago, and William Benbow Thompson, Los Angeles.

Dr. Howard F. West, Los Angeles, read a paper on "Diabetes and Pregnancy." Discussed by Drs. William F. Mengert, Iowa City; Ralph H. Major, Kansas City, Mo., and Howard F. West, Los Angeles.

Dr. Julius Jensen, St. Louis, read a paper on "Heart Disease and Pregnancy." Discussed by Drs. L. A. Calkins, Kansas City, Mo.; Ralph H. Leikart, Omaha, and Julius Jensen, St. Louis.

SECTION ON OPHTHALMOLOGY

Wednesday, May 13—Morning

The meeting was called to order at 9 o'clock by the chairman, Dr. John Green, St. Louis.

Dr. John Green, St. Louis, read the chairman's address.

Drs. C. S. O'Brien and A. E. Braley, Iowa City, presented a paper on "Tumors of the Eyelids: A Clinical and Pathologic Study." Discussed by Drs. Arnold Knapp, New York; Algernon B. Reese, New York, and C. S. O'Brien, Iowa City.

Dr. William L. Benedict, Rochester, Minn., read a paper on "Adenocarcinoma of the Orbit." Discussed by Drs. Martin Cohen, New York; Walter E. Camp, Minneapolis, and Arnold Knapp, New York.

Dr. Alfred Cowan, Philadelphia, read a paper on "Causes of Blindness in Pennsylvania, from the Medical and Social Aspects." Discussed by Drs. E. V. L. Brown, Chicago; William H. Crisp, Denver; Conrad Berens, New York, and Alfred Cowan, Philadelphia.

Dr. Edward Jackson, Denver, read a paper on "The True Importance of Aniseikonia." Discussed by Drs. Adelbert Ames, Hanover, N. H.; Walter B. Lancaster, Boston; Alfred Bielschowsky, Hanover, N. H.; Conrad Berens, New York; William F. Hardy, St. Louis; Otto Barkan, San Francisco, and Edward Jackson, Denver.

Dr. Warren D. Horner, San Francisco, read a paper on "Cataracts Following Dinitrophenol Treatment for Obesity." Discussed by Drs. Arthur J. Bedell, Albany, N. Y.; Albert D. Frost, Columbus, Ohio; Earl Whedon, Sheridan, Wyo.; Charles Lukens, Toledo, Ohio; Thurber Le Win, Buffalo; Otto Barkan, San Francisco, and Warren D. Horner, San Francisco.

Thursday, May 14—Morning

Dr. Albert C. Snell, Rochester, N. Y., read a paper on "A Statistical Study of Functional Muscle Tests in Axial Myopia." Discussed by Drs. Bennett Y. Alvis, St. Louis; Thomas D. Allen, Chicago; Alfred Bielschowsky, Hanover, N. H., and Albert C. Snell, Rochester, N. Y.

The chairman, Dr. John Green, St. Louis, called for an executive session to consider a resolution.

It was moved by Dr. Arthur J. Bedell, Albany, N. Y., duly seconded and carried, that the following resolution be presented to the House of Delegates Thursday afternoon:

Whereas, At the 1934 session of the American Medical Association a resolution emanating from this section was approved by the House of Delegates whereby we registered our disapproval of the employment of optometrists by hospitals; and

Whereas, At the Atlantic City session of this section we presented a resolution to the House of Delegates of the American Medical Association which in substance stated that we were opposed to the association of our members and those of the optical trade; and

Whereas, This resolution was adopted by the House of Delegates; and

Whereas, There are attempts to force some ophthalmologists to instruct students of optometry; and

Whereas, We believe this unwise, unethical and inadvisable; therefore, be it

Resolved, That we, the Section on Ophthalmology, instruct our delegate to the House of Delegates to present this resolution as an expression of our views with the hope that this action will be officially approved and given wide publicity through the pages of The Journal.

The executive session was terminated on motion, duly seconded and carried.

Dr. Webb W. Weeks, New York, read a paper on "Critical Analysis of Glaucoma Operations."

Dr. John M. Wheeler, New York, read a paper on "Iridectomy with Cyclodialysis for Reduction of Ocular Tension."

These two papers were discussed by Drs. Harry S. Gradle, Chicago; Philip D. O'Connor, Chicago; John O. McReynolds, Dallas, Texas; Frank E. Burch, St. Paul; Otto Barkan, San

Francisco; Sanford Gifford, Chicago; Warren D. Horner, San Francisco; Webb W. Weeks, New York, and John M. Wheeler, New York.

Dr. Nathan K. Lazar, Chicago, read a paper on "Early Eye Complications in Meningococcic Meningitis." Discussed by Drs. Archibald L. Hoyne, Chicago; Parker Heath, Detroit; Henry C. Haden, Houston, Texas; Albert H. Mann, Texarkana, Texas, and Nathan K. Lazar, Chicago.

At the Demonstration Session the following were shown:

Dr. Clifford B. Walker, Los Angeles, presented new methods in galvanic and diathermic treatment of retinal detachment.

Dr. Grady E. Clay, Atlanta, Ga., presented grafts from the prepuce and labia minora for the conjunctiva and restoration of the socket.

Dr. Otto Barkan, San Francisco, presented an operation for chronic primary glaucoma and for opening Schlemm's canal under direct vision using a contact glass.

Dr. Everett C. Moulton, Fort Smith, Ark., presented a case of bilateral anterior lenticonus.

Dr. Walter S. Atkinson, Watertown, N. Y., presented a retrobulbar injection within the muscular cone or cone injection.

Dr. Charles N. Spratt, Minneapolis, presented the use of Callahan tubes in the treatment of lacrimal stenosis and chronic dacryocystitis.

Dr. Walter B. Lancaster, Boston, presented a magnet.

Dr. Leo Loeb Mayer, Chicago, presented a neon flash illuminated perimeter.

Dr. William H. Luedde, St. Louis, presented a transparent exophthalmometer.

Dr. T. D. Allen, Chicago, presented a simple cone for tangent screen.

Dr. Conrad Berens, New York, presented a lens for patients with detachment of the retina, and a retractor to be used in operations for detachment of the retina.

Dr. Parker Heath, Detroit, presented a set of instruments for lid treatment.

Friday, May 15—Morning

Executive Session

Dr. Harry S. Gradle, Chicago, presented the report of the Committee on Compensation Tables. The report was adopted and the committee continued.

Dr. Edward Jackson, Denver, presented the report of the American Committee on Optics and Visual Physiology. The report was accepted.

The report of the Committee on the Knapp Testimonial Fund was presented by the treasurer, Dr. Parker Heath, Detroit. The report was accepted.

For the Committee on Awarding the Knapp Medal, Dr. William E. Shahan, St. Louis, reported that no award would be made this year.

The report of the Committee on the American Board of Ophthalmology was read by Dr. John Green, St. Louis. The report was accepted.

The report of Dr. Jonas S. Friedenwald, Baltimore, for the Committee on National Museum of Ophthalmic Pathology was read by Dr. Parker Heath, Detroit. The report was accepted.

The report of Chairman Thomas B. Holloway, Philadelphia, for the Committee from the Section to Cooperate with the National Committee for the Prevention of Blindness was read by Dr. Parker Heath, Detroit. The report was accepted.

Dr. Albert N. Lemoine, Kansas City, Mo., read the report of the Committee on Scientific Exhibit from the Section. The report was accepted.

Dr. Emory Hill, Richmond, Va., reported as section delegate to the House of Delegates.

There was no report from the Committee on Museum of Ophthalmic History; the committee was continued.

The report of the Committee on Ophthalmic Standards was presented by Dr. Clifford B. Walker, Los Angeles. The report was accepted and the committee continued.

The following officers were elected: chairman, Dr. William L. Benedict, Rochester, Minn.; vice chairman, Emory Hill, Richmond, Va.; secretary, Dr. Parker Heath, Detroit, continued in office.

Dr. S. J. Beach, Portland, Maine, was appointed as member of the American Board of Ophthalmology to fill the one year term expired of Dr. John Green.

Dr. Walter B. Lancaster, Boston, was reappointed to fill a vacancy on the American Committee (Joint) on Optics and Visual Physiology.

Dr. Georgiana Dvorak Theobald, Oak Park, Ill., was appointed to fill the vacancy of chairman of the Committee for Scientific Exhibit from the Section.

The chairman announced that there was no award of the Ophthalmic Research Medal of the American Medical Association this year.

The following members were elected to serve as the Knapp Medal Award Committee: Drs. E. V. L. Brown, Chicago; C. A. Clapp, Baltimore, and Frederick H. Verhoeff, Boston, chairman.

Dr. Albert L. Brown, Cincinnati, read a paper on "Effect of Intra-Ocular Typhoid Antibody Concentration on Experimental Corneal Ulcers." Discussed by Drs. Charles A. Bahn, New Orleans; Phillips Thygeson, Iowa City, and Albert L. Brown, Cincinnati.

Dr. Bertha A. Klien, Chicago, read a paper on "Malformations of the Posterior Segment of the Human Eye: An Embryologic Interpretation." Discussed by Drs. Henry C. Haden, Houston, Texas; Derrick T. Vail, Cincinnati, and Bertha A. Klien, Chicago.

Drs. Norman P. Scala, Washington, D. C., and Ernest A. Spiegel, Philadelphia, presented a paper on "The Cortical Innervations of Ocular Movements." Discussed by Drs. Alfred Bielschowsky, Hanover, N. H., and Ernest A. Spiegel, Philadelphia.

Dr. Harvey D. Lamb, St. Louis, read a paper on "Clinical and Anatomic Observations in Fellow Eyes with Chronic Tuberculous Uveitis." Discussed by Drs. Beulah Cushman, Chicago; Lawrence T. Post, St. Louis, and Harvey D. Lamb, St. Louis.

Dr. J. L. Bressler, Houston, Texas, read a paper on "A Study of More Than Two Hundred Postoperative Strabismus Cases." Discussed by Drs. Conrad Berens, New York; Albert N. Lemoine, Kansas City, Mo., and J. L. Bressler, Houston, Texas.

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SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

Wednesday, May 13—Afternoon

The meeting was called to order at 2 o'clock by the chairman, Dr. Ralph A. Fenton, Portland, Ore.

Dr. Lyman G. Richards, Boston, read a paper on "Pitfalls in the Diagnosis and Treatment of Retropharyngeal Abscess in Children." Discussed by Drs. Samuel Iglauer, Cincinnati; Horace R. Lyons, Chicago; E. Frank Chase, Seattle; Gabriel Tucker, Philadelphia; William D. Black, St. Louis, and Lyman G. Richards, Boston.

Dr. Edward Cecil Sewall, San Francisco, read a paper on "Chronic Sinusitis: The Source and Carrier of the Common Cold." Discussed by Drs. Virgil W. McCarty, Kansas City, Mo.; T. R. Gittins, Sioux City, Iowa; Howard C. Ballenger, Winnetka, Ill.; Robert F. Ridpath, Philadelphia; Herman Semenov, Los Angeles, and Edward C. Sewall, San Francisco.

The application of Dr. Herman Brown, D.D.S., Irvington, N. J., was approved for Associate Fellowship in the American Medical Association.

Dr. Harris P. Mosher, Boston, read a paper on "Osteomyelitis of the Frontal Bone." Discussed by Drs. Ernest Sachs, St. Louis; John J. Shea, Memphis, Tenn.; O. Jason Dixon, Kansas City, Mo.; Joseph E. J. King, N. Y., and Harris P. Mosher, Boston.

Dr. Marvin M. Cullom, Nashville, Tenn., read a paper on "The Chronicity of Sinus Disease and Its Relation to Middle Ear Infection and Deafness." Discussed by Drs. Willis F.

Manges, Philadelphia; Carrol L. Smith, Spokane, Wash.; O. S. Gilliland, Kansas City, Mo., and Marvin M. Cullom, Nashville.

Dr. Henry M. Goodyear, Cincinnati, read a paper on "The Etiology and Treatment of Hemorrhage of the Nose and Throat." Discussed by Drs. Frank R. Spencer, Boulder, Colo.; Sam E. Roberts, Kansas City, Mo.; Thomas C. Galloway, Evanston, Ill., and Henry M. Goodyear, Cincinnati.

THURSDAY, MAY 14—AFTERNOON

Dr. Ralph A. Fenton, Portland, Ore., read the chairman's address, entitled "The Physiologic Approach to Otolaryngology."

Dr. Albert Kuntz, St. Louis, read a paper on "The Autonomic Nervous System in Relation to Otolaryngology." Discussed by Drs. Leo Stone, Topeka, Kan.; Gordon F. Harkness, Davenport, Iowa; Harris H. Vail, Cincinnati, and Albert Kuntz, St. Louis.

Drs. Loyal Davis and Edwin J. Blonder, Chicago, presented a paper on "The Galvanic Falling Reaction in Patients with Verified Intracranial Neoplasms."

Drs. George M. Coates, Benjamin H. Shuster and Herman B. Slotkin, Philadelphia, presented a paper on "The Vestibular (Bárány) Tests in the Diagnosis and Localization of Intracranial Lesions."

These two papers were discussed by Drs. Winchell McK. Craig, Rochester, Minn.; Claude T. Uren, Omaha; John C. McKinley, Minneapolis; Sam E. Roberts, Kansas City, Mo.; Edwin J. Blonder, Chicago, and George M. Coates, Philadelphia.

Dr. Porter P. Vinson, Rochester, Minn., read a paper on "The Diagnosis and Treatment of Primary Malignant Disease of the Tracheobronchial Tree." Discussed by Drs. John D. Kernan, New York; Edward H. Skinner, Kansas City, Mo.; Millard F. Arbuckle, St. Louis; Edwin N. Broyles, Baltimore, and Porter P. Vinson, Rochester, Minn.

Drs. Samuel J. Crowe, and Edwin N. Broyles, Baltimore, presented a paper on "Late Results Following Operations for the Cure of Carcinoma of the Larynx." Discussed by Drs. Gabriel Tucker, Philadelphia; Murdock S. Equen, Atlanta, Ga.; Gordon B. New, Rochester, Minn.; Louis H. Clerf, Philadelphia; E. Lee Myers, St. Louis, and Edwin N. Broyles, Baltimore.

FRIDAY, MAY 15—AFTERNOON

The following officers were elected: chairman, Robert F. Ridpath, Philadelphia; vice chairman, Leroy A. Schall, Boston; secretary, Gordon B. New, Rochester, Minn.

Dr. John J. Shea, Memphis, Tenn., reported for the American Board on Otolaryngology that they had held two examinations during 1935, one in New York City before the American Medical Association meeting, and the other before the meeting of the American Academy of Ophthalmology and Otolaryngology in Cincinnati. There were 146 candidates examined, of whom 113 passed and forty-five failed, the total number certificated to date being 2,411. It is of interest historically to see the growth of the examining boards, now numbering nine, with three in the stage of formation. The trail was originally blazed by the Ophthalmological Board and the Board of Otolaryngology. It is worthy of record to state that the idea of forming an advisory board for the various specialties originated in the Board of Otolaryngology. The advisory board is holding rigidly to the original conception that it should be an advisory board and not one of regulation. The advisory board in conjunction with the Council on Medical Education and Hospitals of the American Medical Association has limited the specialties in medicine to twelve. The report was received and placed on file.

Dr. H. Marshall Taylor, Jacksonville, Fla., gave the report of the Committee on Hygiene of Swimming. The report was received and filed.

Dr. Herman Semenov, Los Angeles, read a paper on "Otitis Media in Infants and Adults: A Histopathologic Study." Discussed by Drs. William A. Wagner, New Orleans; Louis K. Guggenheim, St. Louis, and Herman Semenov, Los Angeles.

Dr. H. J. Profant, Santa Barbara, Calif., read a paper on "Petrositis."

Dr. Wells P. Eagleton, Newark, N. J., read a paper on "Osteomyelitis of the Inferior Surface of the Petrous Pyramid."

These two papers were discussed by Drs. George M. Coates, Philadelphia; Harold I. Lillie, Rochester, Minn.; Mervin C. Myerson, New York; H. J. Profant, Santa Barbara, Calif., and Wells P. Eagleton, Newark, N. J.

Dr. James B. Costen, St. Louis, read a paper on "Neuralgias and Ear Symptoms Associated with Disturbed Function of the Temporomandibular Joint." Discussed by Drs. Roland M. Klemme, St. Louis; Wendell G. Scott, St. Louis; Sam E. Roberts, Kansas City, Mo., and James B. Costen, St. Louis.

Drs. Walter B. Hoover and James L. Poppen, Boston, presented a paper on "Glossopharyngeal Neuralgia." Discussed by Drs. J. Jay Keegan, Omaha; French K. Hansel, St. Louis, and Walter B. Hoover, Boston.

SECTION ON PEDIATRICS

WEDNESDAY, MAY 13—AFTERNOON

The meeting was called to order at 2:10 by the chairman, Dr. Horton R. Casparis, Nashville, Tenn.

Dr. Horton R. Casparis, Nashville, Tenn., read the chairman's address, entitled "Some of the Preventive Aspects of the Mental Health Problem."

Dr. Evarts A. Graham, St. Louis, read a paper on "Surgical Aspects of Chronic Lung Infections in Children."

Drs. Chevalier Jackson and Chevalier L. Jackson, Philadelphia, presented a paper on "Acute Infective Laryngotracheobronchitis of Children." Discussed by Drs. Joseph Brennemann, Winnetka, Ill.; Clifford G. Grulee, Evanston, Ill.; Isaac A. Abt, Chicago; Ralph M. Tyson, Philadelphia, and Chevalier L. Jackson, Philadelphia.

Drs. Adolph G. DeSanctis and Edward W. Peterson, New York, presented a paper on "Appendicitis in Children: A Survey of Three Hundred Cases." Discussed by Drs. Rupert F. Carter, New York, and Leslie O. Ashton, New York.

Dr. Percival Nicholson, Ardmore, Pa., read a paper on "Mechanical Lesions of the Appendix in Children as a Basis for Appendicitis." Discussion on the previous paper continued, in conjunction with discussion of Dr. Nicholson's paper, by Drs. Walter Estell Lee, Philadelphia; Roland Hill, St. Louis; W. Ambrose McGee, Richmond, Va.; L. R. De Buys, New Orleans; Clifford Sweet, Oakland, Calif.; Joseph Brennemann, Winnetka, Ill.; Adolph G. DeSanctis, New York, and Percival Nicholson, Ardmore, Pa.

The chairman appointed Drs. Clifford Sweet, Oakland, Calif.; Oscar Reiss, Los Angeles, and Leslie Moore, Dallas, Texas, as a resolutions committee.

Dr. Robert A. Strong, New Orleans, read a paper on "Xanthomatosis (Schüller-Christian's Disease)." Discussed by Drs. H. R. Wahl, Kansas City, Mo.; John Zahorsky, St. Louis, and Robert A. Strong, New Orleans.

THURSDAY, MAY 14—AFTERNOON

Dr. Jean V. Cooke, St. Louis, read a paper on "Active Artificial Immunization in Diphtheria: The Relative Effectiveness of Various Antigens, and the Duration of the Immunity." Discussed by Drs. Charles R. Barr, Philadelphia; J. V. Greenebaum, Cincinnati; H. F. Helmholz, Rochester, Minn., and Jean V. Cooke, St. Louis.

Drs. C. A. Neymann and S. L. Osborne, Chicago, presented a paper on "The Treatment of Chorea by Means of Electropyrexia." Discussed by Drs. Maurice L. Blatt, Chicago, and C. A. Neymann, Chicago.

Dr. Albert W. Snoke, San Francisco, read a paper on "The Classification and Prognosis of Glomerular Nephritis in Childhood." Discussed by Drs. H. F. Helmholz, Rochester, Minn., and Albert W. Snoke, San Francisco.

Dr. Julius H. Hess, Chicago, read a paper on "The Chicago City-Wide Plan for the Care of Premature Infants." Discussed by Drs. Maurice L. Blatt, Chicago, and William J. Orr, Buffalo.

Dr. Aphrodite J. Hofsommer, Webster Groves, Mo., read a paper on "Lip Reading and the Intelligence Quotient of the Hard of Hearing Child." Discussed by Drs. Horace Newhart,

Minneapolis; Horton R. Casparis, Nashville, Tenn., and Aphrodite J. Hofsommer, Webster Groves, Mo.

Dr. John Hart Davis, Cleveland, read a paper on "Segmental Neuralgia in Childhood Simulating Visceral Disease." Discussed by Drs. John A. Toomey, Lakewood, Ohio; Hugh L. Dwyer, Kansas City, Mo., and John Hart Davis, Cleveland.

Friday, May 15—Afternoon

The following officers were elected: chairman, Dr. Ralph M. Tyson, Philadelphia; vice chairman, Dr. Aldrich C. Crowe, Ocean City, N. J.; secretary, Dr. Albert D. Kaiser, Rochester, N. Y.; executive committee: Dr. A. Graeme Mitchell, Cincinnati; Dr. Horton R. Casparis, Nashville, Tenn., and Dr. Ralph M. Tyson, Philadelphia; delegate, Dr. William Weston, Columbia, S. C.; alternate, Dr. A. Graeme Mitchell, Cincinnati; representative to serve on American Board of Pediatrics, Dr. Frank P. Gengenbach, Denver.

Dr. Frank C. Neff, Kansas City, Mo., presented the Report of the Committee on the Jacobi Fund as follows:

Dr. Olin West, who is, as you know, the Secretary and General Manager of the American Medical Association, has written to me that the Association cannot continue to publish the bound volumes of the Transactions of the various sections unless there come at least 350 orders for the particular section volume. It seems to many of us that it would be unfortunate to have an interruption in the archives of this section. The subscribers to the Jacobi Fund have made it possible thus far to continue our Transactions. It will be necessary either for the Jacobi Fund to underwrite the loss which the Association undergoes or there will be no continuance of our available printed records.

The Jacobi Committee, therefore, will undertake to secure enough subscriptions so that at least 350 copies of the Transactions may be assured the publishers. For this reason we are asking the friends of the section to subscribe in greater numbers, and we are reducing the amount asked to $3 in the hope that many more will care to aid the fund and secure the volume. The committee is also asking that the number of men on the committee be reduced to three, instead of five, making it easier to have committee meetings. The personnel of the committee, therefore, will consist of each retiring chairman of this section, who will hold office for three years. It is expected within another year or two to make the secretary of the section, who actually holds office for three years, the active secretary and treasurer of the Jacobi Fund during that term. We would like to have a motion from the floor at the conclusion of this report regarding your wishes as to the Transactions, and the other changes suggested.

We wish to emphasize at this time the announcement which is appearing in the medical journals of the dedication of the monument to the memory of Abraham Jacobi, which is to take place on Saturday, June 13, at 2 p. m., at the beautiful shore village of Bolton Landing, Lake George, N. Y. This spot can be reached by bus or highway, and any physicians who may wish to do so are invited to attend the final session of the American Pediatric Society at that village Saturday morning, June 13, at 9:30, remaining for the dedication of the Jacobi Memorial in the afternoon. An interesting program has been prepared with well known pediatricians and educators, who will speak during the dedication. The Jacobi Memorial Fund is sponsor for the erection of this monument, to the memory of the much beloved pioneer who held the first chair in the teaching of pediatrics in America and who was an honored president of the American Medical Association. Dr. Frederic W. Schlutz, Chicago, of this section will be the presiding officer.

The finances of the Jacobi Fund are in excellent condition. A report thereof will be sent for publication by the American Medical Association and will appear, we hope, in another issue of the Transactions.

The Committee of the Abraham Jacobi Memorial Fund, Section on Pediatrics.
J. I. Durand, Seattle, 1936,
Chairman.
Frederic W. Schlutz, Chicago, 1937.
Alfred A. Walker, Birmingham, Ala., 1938.
Graeme Mitchell, Cincinnati, 1939.
Frank C. Neff, Kansas City, Mo.,
Secretary.

On motion of Dr. Oscar Reiss, Los Angeles, regularly seconded, it was voted that the report be adopted.

Dr. Norman Ward Clein, Seattle, read a paper on "Allergy as the Cause of Frequent Colds and Chronic Coughs in Children." Discussed by Drs. Ralph Bowen, Oklahoma City; George Piness, Los Angeles; James C. Overall, Nashville, Tenn.; F. M. Pottenger Jr., Monrovia, Calif., and Norman Ward Clein, Seattle.

Dr. Clifford Sweet, Oakland, Calif., read a paper on "Voluntary Food Habits of Normal Children." Discussed by Drs. W. C. C. Cole, Detroit; J. D. Boyd, Iowa City, and Clifford Sweet, Oakland, Calif.

Dr. Joseph C. Regan, Brooklyn, read a paper on "Changes in Acid Base Equilibrium in Whooping Cough: Relation to the Underlying Pathogenesis of the Disease—Therapeutic Significance." Discussed by Drs. Frank C. Neff, Kansas City, Mo.; W. Ambrose McGee, Richmond, Va., and Joseph C. Regan, Brooklyn.

Drs. Emil Bogen, Olive View, Calif., and M. A. Gifford, Bakersfield, Calif., presented a paper on "Immunization Against Infantile Paralysis." Discussed by Drs. J. P. Leake, Washington, D. C.; M. A. Gifford, Bakersfield, Calif.; Percival Nicholson, Ardmore, Pa.; S. D. Kramer, Brooklyn, and Emil Bogen, Olive View, Calif.

Dr. Paul H. Harmon, Chicago, read a paper on "Significance of Poliocidal Substances in Resistance and Recovery from Poliomyelitis." Discussed by Drs. Sydney O. Levinson and Paul H. Harmon, Chicago.

Dr. Archibald L. Hoyne, Chicago, read a paper on "Intravenous Treatment of Meningococcic Meningitis with Meningococcus Antitoxin." Discussed by Drs. Albert G. Bower, Glendale, Calif.; Gerald F. Kempf, Indianapolis; Gilbert J. Levy, Memphis, Tenn., and Archibald L. Hoyne, Chicago.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

Wednesday, May 13—Morning

The meeting was called to order at 9 o'clock by the chairman, Dr. Chauncey D. Leake, San Francisco.

On motion by Dr. Leonard G. Rowntree, Philadelphia, seconded and carried, it was voted that Dr. H. A. Shoemaker, professor of pharmacology, University of Oklahoma, be recommended to the House of Delegates as an Associate Fellow in the Association.

On motion by Dr. Leonard G. Rowntree, Philadelphia, seconded and carried, it was voted that approval be given to the resolution approving the action of the House of Delegates in petitioning Congress to allot at least 5,000,000 cubic feet of helium annually for medicinal purposes.

On motion by Dr. Rowntree, seconded and carried, a resolution to the House of Delegates of the American Medical Association was approved that the proper American Medical Association agencies make public whatever information is available regarding the medical aspects of chemical contraceptives.

On motion of Dr. Irving Wright, New York, seconded and carried, it was voted to endorse the plea for a Section on Anesthesia and to protest against expanding the Section on Pharmacology and Therapeutics to include anesthesia.

It was moved by Dr. Charles W. Dunn, Philadelphia, seconded and carried, that the House of Delegates be asked to petition Congress to apply the same regulations to the advertising of drugs as now apply to the labeling of them.

Drs. Charles Mazer and S. Leon Israel, Philadelphia, presented a paper on "Studies on the Optimal Dosage of Estrogenic Substances." Discussed by Drs. J. P. Pratt, Detroit; Marguerite S. Williams, Tucson, Ariz.; Elmer L. Sevringhaus, Madison, Wis.; Chauncey D. Leake, San Francisco, and Charles Mazer, Philadelphia.

Drs. Willard O. Thompson, Phoebe K. Thompson, Samuel G. Taylor III and William S. Hoffman, Chicago, presented a paper on "An Extract of the Adrenal Cortex Effective in Addison's Disease." Discussed by Drs. Russell M. Wilder, Rochester, Minn.; Leonard G. Rowntree, Philadelphia, and Willard O. Thompson, Chicago.

Drs. Leonard G. Rowntree and N. H. Einhorn, Philadelphia, and A. M. Hanson, Faribault, Minn., presented a paper on "The Rôle of the Thymus and Pineal Gland in Growth and Development." Discussed by Drs. Chauncey D. Leake, San

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Francisco; George E. Wakerlin, Louisville, Ky.; John Z. Brown, Salt Lake City; Willard O. Thompson, Chicago, and Leonard G. Rowntree, Philadelphia.

Dr. Wolfgang Heubner, Berlin, Germany, read a paper on "Need for International Scientific Nomenclature for Therapeutic Substances." Discussed by Drs. Bernard Fantus, Chicago; John Z. Brown, Salt Lake City; W. F. Von Oettingen, Wilmington, Del.; P. N. Leech, Chicago; Chauncey D. Leake, San Francisco, and Wolfgang Heubner, Berlin, Germany.

Drs. D. E. Jackson and Helen L. Jackson, Cincinnati, presented a paper on "Experimental and Clinical Observations Regarding Angina Pectoris and Some Related Symptoms." Discussed by Drs. Lewis Gunther, Los Angeles; H. B. Haag, Richmond, Va.; Morris H. Nathanson, Minneapolis; George E. Wakerlin, Louisville, Ky.; Drew Luten, St. Louis, and D. E. Jackson, Cincinnati.

Drs. George R. Herrmann and George M. Decherd Jr., Galveston, Texas, presented a paper on "Further Studies on the Mechanism of Diuresis, with Especial Reference to the Action of Some Newer Diuretics." Discussed by Drs. Joseph M. Hayman Jr., Cleveland; Edward J. Stieglitz, Chicago; Benjamin Jablons, New York, and George R. Herrmann, Galveston, Texas.

Dr. Chauncey D. Leake, San Francisco, read the chairman's address, entitled "The Practical Pharmacology of Central Nervous System Depressant Drugs."

It was moved by Dr. Samuel M. Gordon, Chicago, seconded by Charles W. Dunn, Philadelphia, and carried, that the Section on Pharmacology and Therapeutics endorse the principle that discoverers of substances, simple or complex, possessing possible therapeutic uses communicate first with the Council on Pharmacy and Chemistry in order to determine whether or not they agree with the fundamentally sound rules on nomenclature adopted by the Council before introducing coined names into the literature.

THURSDAY, MAY 14, MORNING

A joint meeting was held with the Section on Practice of Medicine. For a report of the proceedings, see the minutes of that section.

FRIDAY, MAY 15—MORNING

The following officers were elected: chairman, Dr. N. C. Gilbert, Chicago; vice chairman, Dr. Russell L. Haden, Cleveland; secretary, Dr. Irving Wright, New York; delegate, Dr. Cary Eggleston, New York; alternate, Dr. N. M. Keith, Rochester, Minn.; executive committee, Drs. Carl H. Greene, New York, Chauncey D. Leake, San Francisco, and N. C. Gilbert, Chicago.

It was regularly moved, seconded and carried that the section extend a vote of thanks to Dr. Russell L. Haden, Cleveland, for his three years of work as secretary of the section.

Drs. Walter L. Palmer and Paul S. Woodall, Chicago, presented a paper on "Cinchophen—Is There a Safe Method of Administration?" Discussed by Drs. Manfred W. Comfort, Rochester, Minn.; D. R. Cimenko, Cold Spring Harbor, N. Y.; R. Garfield Snyder, New York; Chauncey D. Leake, San Francisco, and Walter L. Palmer, Chicago, Ill.

Dr. Milton Plotz, Brooklyn, read a paper on "Postprandial Insulin: Individualizing Time of Administration of Insulin." Discussed by Drs. Ralph H. Major, Kansas City, Mo., and Russell M. Wilder, Rochester, Minn.

Drs. John Russell Twiss and Carl H. Greene, New York, presented a paper on "Results of Dietary and Medical Treatment in Disease of the Gallbladder." Discussed by Drs. George B. Eusterman, Rochester, Minn.; Chauncey D. Leake, San Francisco, and John Russell Twiss, New York.

Drs. Norman A. David, Cincinnati, and George A. Emerson, Morgantown, W. Va., presented a paper on "The Present Status of Research and Teaching in Pharmacology." Discussed by Drs. H. B. Haag, Richmond, Va.; Charles W. Greene, Columbia, Mo.; Carl A. Dragstedt, Chicago; George E. Wakerlin, Louisville, Ky.; D. R. Cimenko, Cold Spring Harbor, N. Y.; Chauncey D. Leake, San Francisco, and George A. Emerson, Morgantown, W. Va.

Dr. Bayard T. Horton, Rochester, Minn., read a paper on "Hypersensitiveness to Cold, with Local and Systemic Manifestations of a Histamine-Like Character: Its Amenability to Treatment." Discussed by Drs. Chauncey D. Leake, San Francisco; Isidore Kinkelman, Elgin, Ill.; A. C. Tenney, Chicago; Morris H. Nathanson, Minneapolis, and Bayard T. Horton, Rochester, Minn.

Dr. Carl A. Dragstedt, Chicago, read a paper on "A Pharmacologic Study of the Toxemia Theory of Surgical Shock." Discussed by Drs. Chauncey D. Leake, San Francisco, and Carl A. Dragstedt, Chicago.

SECTION ON PATHOLOGY AND PHYSIOLOGY

WEDNESDAY, MAY 13—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. Henry C. Sweany, Chicago.

The chairman appointed as a nominating committee, Drs. William Carpenter MacCarty, Rochester, Minn.; Harry J. Corper, Denver, and Israel Davidsohn, Chicago.

Dr. Henry C. Sweany, Chicago, read the chairman's address, entitled "Pathologic Interpretations of Roentgenologic Shadows in Pneumoconiosis."

Dr. Israel Davidsohn, Chicago, read a paper on "Serologic Diagnosis of Infectious Mononucleosis." Discussed by Drs. Richard H. Jaffé, Chicago; A. S. Giordano, South Bend, Ind., and Israel Davidsohn, Chicago.

Dr. Richard H. Jaffé, Chicago, read a paper on "Chronic Thyroiditis."

Dr. Arthur E. Hertzler, Halstead, Kan., read a paper on "End Results of Very Radical Thyroidectomies."

These two papers were discussed by Drs. Lindon Seed, Chicago; Leon Asher, Berne, Switzerland; Anton J. Carlson, Chicago; Richard H. Jaffé, Chicago, and Arthur E. Hertzler, Halstead, Kan.

Dr. Leon Asher, Berne, Switzerland, read a paper on "Nervous System and Internal Secretions." No discussion.

Drs. Harry J. Corper, Maurice L. Cohn and A. P. Damerow, Denver, presented a paper on "Specific Artificial Immunity in Tuberculosis." Discussed by Drs. Emil Bogen, Olive View, Calif.; Henry C. Sweany, Chicago, and Harry J. Corper, Denver.

Dr. Henry N. Harkins, Chicago, read a paper on "Surgical Shock in Peritonitis Due to Bile and to Liver Autolysis." Discussed by Drs. Thomas G. Orr, Kansas City, Mo.; Edward C. Mason, Oklahoma City; M. Pinson Neal, Columbia, Mo.; H. M. Trusler, Indianapolis; Anton J. Carlson, Chicago; Norman E. Freeman, Boston, and Henry N. Harkins, Chicago.

Dr. Edward J. Stieglitz, Chicago, read a paper on "The Blood Nitrite." Discussed by Drs. Anton J. Carlson, Chicago, and Edward J. Stieglitz, Chicago.

THURSDAY, MAY 14—AFTERNOON

The following papers were read as a symposium on "Vitamins":

Dr. C. G. King, Pittsburgh: "Chemistry of Vitamin C."

Dr. H. A. Mattill, Iowa City: "Chemistry of Vitamin A."

Dr. Richard J. Black, New York: "Chemistry of the Vitamin B Complex."

Dr. Charles E. Bills, Evansville, Ind.: "New Forms and Sources of Vitamin D."

Dr. S. B. Wolbach, Boston: "The Pathologic Changes Resulting from Vitamin Deficiencies."

Dr. John B. Youmans, Nashville, Tenn.: "The Present Status of Vitamin Deficiencies in Practice."

Dr. Anton J. Carlson, Chicago: "Physiology of Vitamins."

These seven papers were discussed by Drs. Arthur F. Abt, Chicago; Anton J. Carlson, Chicago, and S. B. Wolbach, Boston.

FRIDAY, MAY 15—AFTERNOON

The following officers were elected: chairman, Dr. W. E. Garrey, Nashville, Tenn.; vice chairman, Dr. R. R. Kracke, Emory University, Ga.; secretary, Dr. J. J. Moore, Chicago; delegate, Dr. D. J. Davis, Chicago; alternate, Dr. J. J. Moore, Chicago; executive committee, Drs. Elias P. Lyon, Minneapolis; Henry C. Sweany, Chicago, and W. E. Garrey, Nashville, Tenn.

Secretary Moore made a report for the committee that was appointed last year to meet with the committee from the American Society of Clinical Pathologists, as follows:

This committee was empowered to act for the certification of pathologists and reports several joint meetings with the committee from the American Society of Clinical Pathologists

during the year. A set of by-laws was formulated by this joint committee, which has been accepted by the advisory board of the Boards for Specialties. A preliminary meeting was held in Kansas City with the members of the board appointed by the American Society of Clinical Pathologists. At this preliminary meeting, the incorporation of the American Board of Pathology in Michigan was authorized.

Dr. A. H. Sanford, Rochester, Minn., was nominated temporary chairman, and Dr. Frank A. Hartman, Columbus, Ohio, temporary secretary-treasurer of the board.

It is hoped that the Board of Pathology will be giving examinations at the Atlantic City meeting of the American Medical Association, or probably it will be active enough to give an examination some place this fall.

On motion duly made, seconded and carried, it was voted to adopt the report of the committee as presented.

Dr. Gregory Shwartzman, New York, read a paper on "The Phenomenon of Local Tissue Reactivity to Bacterial Filtrates: The Rôle of Altered Vascular Response in Certain Human Diseases." Discussed by Dr. Gregory Shwartzman, New York.

Drs. Milton B. Cohen, Benjamin S. Kline and Anna May Young, Cleveland, presented a paper on "The Clinical Diagnosis of Periarteritis Nodosa." Discussed by Drs. Henry C. Sweany, Chicago, and Milton B. Cohen, Cleveland.

Dr. William Carpenter MacCarty, Rochester, Minn., read a paper on "Identification of the Cancer Cell." Discussed by Dr. William Carpenter MacCarty, Rochester, Minn.

Dr. James P. Simonds, Chicago, read a paper on "The Effects of Intravenous Injections of Salt Solution in Collapse Due to Mechanical Impounding of Blood in the Splanchnic Region." No discussion.

Dr. Samuel M. Feinberg, Chicago, read a paper on "Seasonal Hay Fever and Asthma Due to Molds." Discussed by Drs. Henry C. Sweany, Chicago; George R. Herrmann, Galveston, Texas, and Samuel M. Feinberg, Chicago.

Dr. Jack Clayton Norris, Atlanta, Ga., read a paper on "Syphilis of the Myocardium and Coronary Arteries." Discussed by Drs. James L. Dubrow, Des Moines, Iowa; George R. Herrmann, Galveston, Texas; Morris H. Nathanson, Minneapolis; Henry C. Sweany, Chicago, and Jack Clayton Norris, Atlanta, Ga.

Drs. Frank W. Hartman and Andrew H. Dowdy, Detroit, presented a paper on "The Physiologic Effects of Fever Therapy as Related to the Preparation and Various Sedatives Employed." Discussed by Dr. James L. Dubrow, Des Moines, Iowa.

SECTION ON NERVOUS AND MENTAL DISEASES

WEDNESDAY, MAY 13—MORNING

The meeting was called to order at 9:15 by the chairman, Dr. Hans H. F. Reese, Madison, Wis.

Dr. Walter Freeman, Washington, D. C., presented the following resolution:

WHEREAS, There is need for a wider and more equal distribution of facilities for the care and treatment of the mentally ill; and

WHEREAS, The standards of such care may be improved by the collection and study of data pertaining to mental hospital services in the United States; and

WHEREAS, The measures and facilities for training personnel in nervous and mental diseases are of very great importance in bringing about improved standards, and

WHEREAS, The joint cooperative committee has been organized for the conduct of a national survey of mental hospital services; and

WHEREAS, That committee has invited the Section on Nervous and Mental Diseases of the American Medical Association to designate two representatives of that section to serve with the committee; therefore be it

Resolved, That the House of Delegates of the American Medical Association approves the designation of two members of its Section on Nervous and Mental Diseases to serve as members of the cooperative committee for the survey of public mental hospital services in the United States.

On motion regularly made and seconded, the foregoing resolution was approved, to be transmitted to the House of Delegates.

Drs. J. Grafton Love and James W. Kernohan, Rochester, Minn., presented a paper on "Epidermoid Tumors of the Brain." Discussed by Drs. Ernest Sachs, St. Louis; R. Glen Spurling, Louisville, Ky.; Joseph E. J. King, New York; Walter E. Dandy, Baltimore, and J. Grafton Love, Rochester, Minn.

Dr. Henry W. Newman, San Francisco, read a paper on "Encephalography with Ethylene." Discussed by Drs. John J. Keegan, Omaha; Mabel G. Masten, Madison, Wis.; J. Grafton Love, Rochester, Minn.; Temple Fay, Philadelphia, and Henry W. Newman, San Francisco.

Drs. R. Glen Spurling and Frank H. Mayfield, Louisville, Ky., presented a paper on "Neoplasms of the Spinal Cord: Report of a Series of Forty-Two Surgical Cases." Discussed by Drs. Percival Bailey, Chicago; Frank R. Teachenor, Kansas City, Mo., and R. Glen Spurling, Louisville, Ky.

Dr. Walter E. Dandy, Baltimore, read a paper on "Newer Aspects of Ménière's Disease: Diagnosis and Treatment." Discussed by Drs. Frank R. Teachenor, Kansas City, Mo.; Francis C. Grant, Philadelphia, and Walter E. Dandy, Baltimore.

Dr. Francis C. Grant, Philadelphia, read a paper on "Alcohol Injection in the Treatment of Major Trigeminal Neuralgia." Discussed by Drs. Walter E. Dandy, Baltimore; J. Grafton Love, Rochester, Minn.; Peter Bassoe, Chicago; Ernest Sachs, St. Louis; James Rudolph Jaeger, Denver; A. L. Skoog, Kansas City, Mo., and Francis C. Grant, Philadelphia.

Dr. Edgar A. Kahn, Ann Arbor, Mich., read a paper on "The Treatment of Encapsulated Brain Abscess: A Method Whereby the Wall Is Brought To or Above the Surface Preliminary to Drainage." Discussed by Drs. R. Glen Spurling, Louisville, Ky.; Joseph E. J. King, New York; Walter E. Dandy, Baltimore; Temple Fay, Philadelphia; James Rudolph Jaeger, Denver; Percival Bailey, Chicago, and Edgar A. Kahn, Ann Arbor, Mich.

THURSDAY, MAY 14—MORNING

The following papers were read as a symposium on "The Action Potentials of the Brain."

Drs. Hallowell Davis and Pauline A. Davis, Boston: "I. In Normal Persons and in Normal States of Cerebral Activity."

Dr. George Kreezer, Vineland, N. J.: "II. In Certain Types of Mental Deficiency."

Drs. Frederic A. Gibbs, William G. Lennox and Erna L. Gibbs, Boston: "III. In Epilepsy: (1) Significance for Diagnosis and Localization; (2) Effect of Drugs and of Conditions Which Influence Seizures."

These three papers were discussed by Drs. L. E. Travis, Iowa City; George H. Bishop, St. Louis; Ernest A. Spiegel, Philadelphia; Temple Fay, Philadelphia; Hallowell Davis, Boston; George Kreezer, Vineland, N. J.; Frederic A. Gibbs, Boston, and William G. Lennox, Boston.

Dr. A. E. Bennett, Omaha, read a paper on "Fever Therapy in Tabes Dorsalis: The Relief of Gastric Crises and Lightning Pains by the Use of the Kettering Hypertherm." Discussed by Drs. Franklin G. Ebaugh, Denver; Henry W. Woltman, Rochester, Minn., and A. E. Bennett, Omaha.

Drs. Clarke H. Barnacle, Franklin G. Ebaugh and Jack R. Ewalt, Denver, presented a paper on "A Comparative Study of Artificial Hyperpyrexia and Therapeutic Malaria in the Treatment of Dementia Paralytica: A Preliminary Report." Discussed by Drs. A. E. Bennett, Omaha; Paul A. O'Leary, Rochester, Minn.; Walter Freeman, Washington, D. C.; William Nelson, St. Louis; Hans H. F. Reese, Madison, Wis., and Clarke H. Barnacle, Denver.

FRIDAY, MAY 15—MORNING

The following officers were elected: chairman, Dr. Henry R. Viets, Boston; vice chairman, Dr. B. Landis Elliott, Kansas City, Mo.; secretary, Dr. Paul C. Bucy, Chicago; delegate, Dr. Tom B. Throckmorton, Des Moines; alternate, Dr. Edward Delehanty, Denver; executive committee: Drs. H. Douglas Singer, Chicago; Hans H. F. Reese, Madison, Wis.; Henry R. Viets, Boston.

Dr. Walter Freeman, Washington, D. C., made the following report, as representative of the section on the American Board of Psychiatry and Neurology:

Since the Atlantic City session of the American Medical Association in 1935 the American Board of Psychiatry and Neurology has held two meetings for the examination and certification of candidates. At the meeting in New York, Dec. 29 and 30, 1935, thirty-seven candidates were certified in psychiatry, nine candidates in neurology and thirty-two candidates in both psychiatry and neurology. At the meeting held in St. Louis, May 8 and 9, 1936, twenty-nine candidates were

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certified in psychiatry, six candidates were certified in neurology and twenty-nine candidates were certified in both psychiatry and neurology.

Lists of the physicians certified have been published in the *Archives of Neurology and Psychiatry* and the *American Journal of Psychiatry*.

At the annual meeting in New York, Dec. 29, 1935, the following officers and directors were elected: president, Dr. H. Douglas Singer, Chicago; vice president, Dr. C. Macfie Campbell, Boston; secretary-treasurer, Dr. Walter Freeman, Washington, D. C., Directors: Dr. Louis Casamajor, New York; Dr. Clarence O. Cheney, New York; Dr. Franklin G. Ebaugh, Denver; Dr. George W. Hall, Chicago; Dr. J. Allen Jackson, Danville, Pa.; Dr. Adolf Meyer, Baltimore; Dr. Lewis J. Pollock, Chicago; Dr. Edwin G. Zabriskie, New York; Dr. Lloyd H. Ziegler, Albany, N. Y.

The term of office of Dr. Lloyd H. Ziegler, nominee from the Section on Nervous and Mental Diseases to the American Board of Psychiatry and Neurology, has expired, and the nomination for his successor is in order.

A committee on graduate education has been appointed to study the facilities for postgraduate work in psychiatry and neurology.

Dr. Tom B. Throckmorton, Des Moines, Iowa, delegate, made his report and stated that the House of Delegates had acted favorably on the resolution referred to it by the section for the appointment of two representatives on the committee to work in conjunction with the United States Public Health Service in making a survey of public mental hospitals in the United States.

Dr. Lloyd H. Ziegler, Albany, N. Y., was chosen as a member of the American Board of Psychiatry and Neurology for a term of four years.

Drs. Franklin G. Ebaugh, Denver, and J. Allen Jackson, Danville, Pa., were chosen as members of the Joint Committee for the Study and Survey of Public Mental Hospitals in the United States.

Dr. Hans H. F. Reese, Madison, Wis., read the chairman's address, entitled "The History of Scalping and Its Clinical Aspects."

Dr. Charles H. Kimberly, Stockbridge, Mass., read a paper on "Psychoneurotic Depressions." Discussed by Drs. William Nelson, St. Louis, and Charles H. Kimberly, Stockbridge, Mass.

Dr. Charles Bradley, East Providence, R. I., read a paper on "A Children's Hospital for Neurologic and Behavior Disorders: Five Years' Experience at the Emma Pendleton Bradley Home." Discussed by Drs. William G. Lennox, Boston; William Nelson, St. Louis, and Charles Bradley, East Providence, R. I.

Dr. Homer P. Rush, Portland, Ore., read a paper on "Interdependence Between the Visceral Nervous System and the Endocrine System." Discussed by Dr. T. Homer Coffen, Portland, Ore.

Dr. J. M. Nielsen, Los Angeles, read a paper on "Unilateral Cerebral Dominance as Related to Mind-Blindness: The Minimal Lesion Capable of Causing Visual Agnosia for Objects." Discussed by Drs. A. L. Skoog, Kansas City, Mo.; William Nelson, St. Louis; Hans H. F. Reese, Madison, Wis., and J. M. Nielsen, Los Angeles.

Drs. Louis L. Tureen, Sidney I. Schwab and Joseph J. Gitt, St. Louis, presented a paper on "Toxic Focal Lesions in the Central Nervous System." Discussed by Drs. Peter Bassoe, Chicago; Walter Freeman, Washington, D. C., and Louis L. Tureen, St. Louis.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

WEDNESDAY, MAY 13—MORNING

The meeting was called to order at 9:10 by the chairman, Dr. Harry R. Foerster, Milwaukee.

Dr. C. W. Finnerud, Chicago, reported for the Scientific Exhibit Committee a balance of $145.93 and announced that the proposed exhibit for the next annual session was one on diseases of the mouth. The chair appointed an auditing committee consisting of Dr. Howard T. Phillips, Wheeling, W. Va., and Dr. Michael Ebert, Chicago, to audit the account of the Scientific Exhibit Committee.

Dr. C. Guy Lane, Boston, read the report of the American Board of Dermatology.

Dr. Harold N. Cole, Cleveland, reported for the Committee on the International Dermatologic Congress at Budapest, at which an International Dermatological Society was formed, which has already compiled a directory of dermatologists of the entire world and is now working on an illustrated atlas for a universal system of terms for use in dermatology. Dr. Howard Fox, New York, supplemented Dr. Cole's report with a brief explanation of the objects of the International Dermatological Society.

Resolutions of sympathy were adopted on the death of Dr. Josef Jadassohn (on motion of Dr. John Eric Dalton, Indianapolis) and Dr. Jeffrey C. Michael, Houston, Texas (on motion of Dr. Howard Morrow, San Francisco) and the secretary was instructed to transmit them to the families of the deceased.

Dr. Harry R. Foerster, Milwaukee, read the chairman's address, entitled "Some Observations on Industrial Dermatology."

Drs. Herbert S. Alden and Jack W. Jones, Atlanta, Ga., presented a paper on "A Modification of Therapy with Gold Compounds in Lupus Erythematosus." Discussed by Drs. James K. Howles, New Orleans; M. E. Obermayer, Chicago; Martin Engman Jr., St. Louis; John Howard King, Nashville, Tenn.; D. W. Goldstein, Fort Smith, Ark.; Wiley M. Sams, Miami, Fla.; Herbert Rattner, Chicago, and Herbert S. Alden, Atlanta, Ga.

Dr. Hamilton Montgomery, Rochester, Minn., read a paper on "Histopathology of Various Types of Cutaneous Tuberculosis." Discussed by Drs. Duncan O. Poth, San Antonio, Texas; Marion B. Sulzberger, New York; Richard L. Sutton Jr., Kansas City, Mo.; C. W. Finnerud, Chicago; Herbert S. Alden, Atlanta, Ga.; Donald M. Pillsbury, Philadelphia, and Hamilton Montgomery, Rochester, Minn.

Drs. James W. Jordon and Earl D. Osborne, Buffalo, presented a paper on "Besnier-Boeck's Disease." Discussed by Drs. J. P. Guequierre, Philadelphia; Marion B. Sulzberger, New York; Moses Scholtz, Los Angeles, and James W. Jordon, Buffalo.

Drs. Fred Wise, Charles R. Rein and David L. Satenstein, New York, presented a paper on "Lichen Ruber Moniliformis: Report of a Hitherto Undescribed Variety of a Rare Dermatosis." Discussed by Drs. F. M. Jacob, Pittsburgh; Hamilton Montgomery, Rochester, Minn.; L. H. Winer, Minneapolis; Fred D. Weidman, Philadelphia, and Charles R. Rein, New York.

Drs. James T. Wayson, Honolulu, H. I., and Fred D. Weidman, Philadelphia, presented a paper on "Aleukemic Reticulosis: An Additional Member of the So-Called Cutaneous Lymphoblastomas."

Dr. Francis W. Lynch, St. Paul, read a paper on "Cutaneous Lesions Associated with Monocytic Leukemia and Reticulo-Endotheliosis."

These two papers were discussed by A. B. Loveman, Louisville, Ky.; Arthur W. Stillians, Chicago; Hamilton Montgomery, Rochester, Minn.; D. W. Goldstein, Fort Smith, Ark.; M. G. Bohrod, Peoria, Ill.; Fred D. Weidman, Philadelphia, and Francis W. Lynch, St. Paul.

THURSDAY, MAY 14—MORNING

The chairman appointed Dr. Howard Morrow, San Francisco, to fill the vacancy on the executive committee caused by the death of Dr. Jeffrey C. Michael, Houston, Texas.

Dr. Michael Ebert, Chicago, reported that the auditing committee appointed to audit the accounts of the Scientific Exhibit Committee had found them correct.

Dr. Marion B. Sulzberger, New York, presented the following report for the Committee on Industrial Dermatoses:

Your committee met yesterday under the chairmanship of Dr. C. Guy Lane, Boston. Your committee recommends that a central clearing house be established for the recording and dissemination of information on industrial dermatoses. It recommends that its studies be continued, in cooperation with the Section on Preventive and Industrial Medicine and Public Health with the United States Public Health Service and with the American Dermatological Association, for the purpose of establishing a cooperative approach to the problems of industrial skin diseases. It further recommends that the committee

be empowered to appoint local subcommittees in various states or districts to gather information and to report operations to this central section committee.

The report was adopted on motion of Dr. C. W. Finnerud, Chicago, regularly seconded and carried.

Drs. Eugene A. Hand and Udo J. Wile, Ann Arbor, Mich., presented a paper on "The Treatment of Lip Cancer: A Clinical Survey of Four Hundred Cases Treated by Different Methods." Discussed by Drs. Everett S. Lain, Oklahoma City; Richard L. Sutton Sr., Kansas City, Mo.; James F. Percy, Los Angeles; Merlin T.-R. Maynard, San Jose, Calif.; H. J. Templeton, Oakland, Calif.; Harry P. Jacobson, Los Angeles; Everett C. Fox, Dallas, Texas; C. F. Lehmann, San Antonio, Texas, and Udo J. Wile, Ann Arbor, Mich.

Drs. Adolph Rostenberg Jr. and Marion B. Sulzberger, New York, presented a paper on "Some Patch Test Observations Based on Five Years' Experience in More Than Nine Hundred Patients with More Than Ten Thousand Tests." Discussed by Drs. M. E. Obermayer, Chicago; S. W. Becker, Chicago; Paul A. O'Leary, Rochester, Minn.; Adolph Rostenberg Jr., New York, and Marion B. Sulzberger, New York.

Drs. Donald M. Pillsbury and Thomas H. Sternberg, Philadelphia, presented a paper on "The Relation of Diet to Skin Infection: A Study of the Influence of High and Low Carbohydrate and High Fat Intakes and Starvation on Experimental Pyogenic Infections in Dogs." Discussed by Drs. John F. Madden, St. Paul; Arthur Schoch, Dallas, Texas; Theodore Cornbleet, Chicago; Victor E. Levine, Omaha; Moses Scholtz, Los Angeles, and Donald M. Pillsbury, Philadelphia.

Drs. E. William Abramowitz, New York, and Maurice H. Noun, Des Moines, Iowa, presented a paper on "'Fixed' Drug Eruptions." Discussed by Drs. Marque O. Nelson, Tulsa, Okla., and Maurice H. Noun, Des Moines, Iowa.

Dr. Carl W. Laymon, Minneapolis, read a paper on "Extracellular Cholesterinosis." Discussed by Drs. C. Guy Lane, Boston; Hamilton Montgomery, Rochester, Minn., and Carl W. Laymon, Minneapolis.

Dr. James Herbert Mitchell, Chicago, read a paper on "Streptococcic Dermatoses of the Ears." Discussed by Drs. Clinton W. Lane, St. Louis; S. W. Becker, Chicago; Anthony C. Cipollaro, New York; Samuel Ayres Jr., Los Angeles; D. T. Gandy, Houston, Texas; Moses Scholtz, Los Angeles, and James Herbert Mitchell, Chicago.

Dr. Theodore Cornbleet, Chicago, read a paper on "Vitamin C and Pigment." Discussed by Drs. S. W. Becker, Chicago; Donald M. Pillsbury, Philadelphia, and Theodore Cornbleet, Chicago.

Friday, May 15—Morning

The following officers were elected: chairman, Dr. Paul A. O'Leary, Rochester, Minn.; vice chairman, Dr. Charles C. Dennie, Kansas City, Mo.; secretary, Dr. Bedford Shelmire, Dallas, Texas; delegate, Dr. Clyde L. Cummer, Cleveland; alternate, Dr. Harold N. Cole, Cleveland; member of the American Board of Dermatology for four consecutive one-year terms, Dr. C. Guy Lane, Boston; chairman, Scientific Exhibit Committee, Dr. Clark W. Finnerud, Chicago; executive committee, Dr. Howard Morrow, San Francisco; Dr. Harry R. Foerster, Milwaukee; Dr. Paul A. O'Leary, Rochester, Minn.

Drs. J. J. Eller and K. A. Kazanjian, New York, presented a paper on "Clinical Evaluation of a New Trichophyton Extract: 'Dermatomycol'." Discussed by Drs. Harry P. Jacobson, Los Angeles; Marion B. Sulzberger, New York; Joseph Grindon Jr., St. Louis; Norman Epstein, San Francisco; W. F. Spiller, Galveston, Texas, and J. J. Eller, New York.

Dr. E. W. Netherton, Cleveland, read a paper on "Arsphenamine Resistant Early Syphilis in Two Instances of Conjugal Infection." Discussed by Drs. John Eric Dalton, Indianapolis; Arthur W. Stillians, Chicago; Harry M. Robinson, Baltimore, and E. W. Netherton, Cleveland.

Drs. Max S. Wien and Minnie Oboler Perlstein, Chicago, presented a paper on "Ulcerative Lesions of the Skin in Lymphogranuloma Inguinale." Discussed by Drs. C. C. Tomlinson, Omaha; Harry M. Robinson, Baltimore; Samuel Goldblatt, Cincinnati; Paul A. O'Leary, Rochester, Minn.; Andrew L. Glaze, Birmingham, Ala.; Marion B. Sulzberger, New York, and Max S. Wien, Chicago.

Dr. R. A. Vonderlehr, Washington, D. C., read a paper on "Untreated Syphilis in the Male Negro: A Comparative Study of Treated and Untreated Cases." Discussed by Drs. Charles C. Dennie, Kansas City, Mo.; Harry M. Robinson, Baltimore; Arthur G. Schoch, Dallas, Texas; James K. Howles, New Orleans, and R. A. Vonderlehr, Washington, D. C.

Drs. J. R. Driver, George W. Binkley and Maurice Sullivan, Cleveland, presented a paper on "Cod Liver Oil Ointments in the Treatment of Indolent Ulcers." Discussed by Drs. Everett C. Fox, Dallas, Texas; Paul Foster, Los Angeles; Harry P. Jacobson, Los Angeles; Adolph Rostenberg Jr., New York; Merlin T.-R. Maynard, San Jose, Calif.; D. W. Goldstein, Fort Smith, Ark.; Fred D. Weidman, Philadelphia; John Downing, Boston; Norman Epstein, San Francisco; Everett Seale, Houston, Texas; J. J. Eller, New York, and J. R. Driver, Cleveland.

On behalf of the section the chairman extended the thanks of the members for the hospitality and arrangements provided by the Kansas City members. There followed the induction of officers, after which the meeting adjourned.

SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

Wednesday, May 13—Afternoon

The meeting was called to order at 2:15 by the chairman, Dr. R. R. Sayers, Washington, D. C.

The chairman announced the appointment of Drs. J. N. Baker, Montgomery, Ala., and Irl C. Riggin, Richmond, Va., to the executive committee to take the places of Drs. Wilson G. Smillie, Boston, and Robert H. Riley, Baltimore, absent.

Dr. R. R. Sayers, Washington, D. C., read the chairman's address, entitled "Industrial Hygiene Problems in the United States."

Dr. George H. Gehrmann, Wilmington, Del., read a paper on "Papilloma and Carcinoma of the Urinary Bladder in Dye Workers." Discussed by Drs. Victor D. Washburn, Wilmington, Del.; J. N. Baker, Montgomery, Ala.; W. F. von Oettingen, Wilmington, Del., and George H. Gehrmann, Wilmington, Del.

Drs. W. C. Dreessen and R. R. Jones, Washington, D. C., presented a paper on "Anthracosilicosis." Discussed by Drs. R. R. Sayers, Washington, D. C.; R. R. Jones, Washington, D. C., and W. C. Dreessen, Washington, D. C.

Dr. Henry Field Smyth, Philadelphia, read a paper on "Safe Practices in the Industrial Use of Carbon Tetrachloride." Discussed by Drs. Paul A. Davis, Akron, Ohio; W. F. von Oettingen, Wilmington, Del.; W. J. McConnell, New York, and Henry Field Smyth, Philadelphia.

Drs. H. H. Schrenk and W. P. Yant, Pittsburgh, presented a paper on "A New Procedure for the Control of Benzene Poisoning." Discussed by Drs. Henry Field Smyth, Philadelphia; Paul A. Davis, Akron, Ohio, and H. H. Schrenk, Pittsburgh.

Thursday, May 14—Afternoon

Dr. J. P. Leake, Washington, D. C., read a paper on "Poliomyelitis: Present Knowledge and Its Bearing on Control." Discussed by Drs. James D. Trask, New Haven, Conn.; Sidney D. Kramer, Brooklyn; Paul H. Harmon, Chicago, and J. P. Leake, Washington, D. C.

Dr. Theodore C. Hempelmann, St. Louis, read a paper on "Immediate Treatment and After-Care of Poliomyelitis Patients." Discussed by Drs. A. G. Bower, Los Angeles; Paul H. Harmon, Chicago, and Theodore C. Hempelmann, St. Louis.

Dr. V. H. Bassett, Savannah, Ga., read a paper on "Rabies and What to Do for the Person Bitten." Discussed by Drs. Edwin H. Schorer, Kansas City, Mo.; J. P. Leake, Washington, D. C.; Thurman B. Rice, Indianapolis, and V. H. Bassett, Savannah, Ga.

Drs. A. E. Keller, Crit Pharris and W. H. Gaub, Nashville, Tenn., presented a paper on "The Opsonocytophagic, Allergic and Agglutination Reactions in the Diagnosis of Undulant Fever." Discussed by Drs. W. S. Leathers, Nashville, Tenn.; J. N. Baker, Montgomery, Ala., and John B. Youmans, Nashville, Tenn.

Drs. T. H. D. Griffitts and Henry Hanson, Jacksonville, Fla., presented a paper on "Significance of an Epidemic of Dengue." Discussed by Drs. V. H. Bassett, Savannah, Ga., and T. H. D. Griffitts, Jacksonville, Fla.

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Mr. O. C. Durham, Chicago, read a paper on "The Evaluation of the Ragweed Hay Fever Resort Areas of North America." Discussed by Dr. Warren T. Vaughan, Richmond, Va., and Mr. O. C. Durham, Chicago.

FRIDAY, MAY 15—AFTERNOON

The following officers were elected: chairman, Dr. L. D. Bristol, New York; vice chairman, Dr. Joseph F. Bredeck, St. Louis; secretary, Dr. Irl C. Riggin, Richmond, Va.; executive committee: Dr. Robert H. Riley, Baltimore; Dr. R. R. Sayers, Washington, D. C., and Dr. L. D. Bristol, New York; delegate, Dr. Stanley H. Osborn, Hartford, Conn.

Dr. Stanley H. Osborn, Hartford, Conn., made his report as delegate.

On motion made by Dr. Stanley H. Osborn, Hartford, Conn., seconded by Dr. E. G. Brown, Topeka, Kan., it was voted that the incoming chairman of the section appoint a committee on accident control and safety to study the various medical aspects of accident control and make recommendations to the next annual meeting, with the suggestion that a resolution thereupon be presented to the House of Delegates through the section delegate.

Dr. Joseph F. Bredeck, St. Louis, read a paper on "What Service Does a Health Department Render to the Practicing Physician?" Discussed by Drs. Stanley H. Osborn, Hartford, Conn., and Joseph F. Bredeck, St. Louis.

Dr. E. G. Brown, Topeka, Kan., read a paper on "The Functions of a State Heath Department." Discussed by Drs. Walter L. Bierring, Des Moines, Iowa, and E. G. Brown, Topeka, Kan.

Dr. W. W. Bauer, Chicago, read a paper on "The Physician's Place in the Public Health Program." Discussed by Drs. George M. Lyon, Huntington, W. Va.; Stanley H. Osborn, Hartford, Conn., and W. W. Bauer, Chicago.

Dr. L. D. Bristol, New York, read a paper on "Medical Aspects of Accident Control." Discussed by Drs. John H. Ogilvie, Kansas City, Mo.; Louis J. Hirschman, Detroit; Stanley H. Osborn, Hartford, Conn., and L. D. Bristol, New York.

Dr. H. T. Dean, Washington, D. C., read a paper on "Chronic Endemic Dental Fluorosis." Discussed by Dr. Carl F. Jordan, Des Moines, Iowa.

SECTION ON UROLOGY

WEDNESDAY, MAY 13—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. John H. Morrissey, New York.

Drs. George H. Ewell, Madison, Wis., and Charles R. Marquardt and James C. Sargent, Milwaukee, presented a paper on "Hydrocele: Its Treatment by the Injection Method." Discussed by Drs. Nelse F. Ockerblad, Kansas City, Mo., and H. W. E. Walther, New Orleans.

Dr. T. D. Moore, Memphis, Tenn., read a paper on "Ureteropelvic Obstruction of the Noncalculous Type in Hydronephrosis." Discussed by Drs. Roy B. Henline, New York; Neil S. Moore, St. Louis; John R. Caulk, St. Louis; Waltman Walters, Rochester, Minn.; Frederic E. B. Foley, St. Paul; Myron J. Hahn, Boston, and T. D. Moore, Memphis, Tenn.

Dr. Charles C. Higgins, Cleveland, read a paper on "Present Status of Dietary Regimens in Treatment of Urinary Calculi."

Dr. Anson L. Clark, Oklahoma City, read a paper on "Present Status of Dietary Regimens in Urinary Infections."

These two papers were discussed by Drs. William F. Braasch, Rochester, Minn.; Richard Chute, Boston; Charles C. Higgins, Cleveland; John K. Ormond, Detroit, and Anson L. Clark, Oklahoma City.

Dr. Walter G. Maddock, Ann Arbor, Mich., read a paper on "Water Balance in Surgical Patients." Discussed by Drs. Leonard G. Rowntree, Philadelphia; A. J. Scholl, Los Angeles, and Walter G. Maddock, Ann Arbor, Mich.

Dr. D. K. Rose, St. Louis, read a paper on "The Present Status of Cystometry." Discussed by Drs. Lloyd G. Lewis, Baltimore; A. Lloyd Stockwell, Kansas City, Mo.; Richard Chute, Boston, and D. K. Rose, St. Louis.

THURSDAY, MAY 14—AFTERNOON

Dr. Frederic E. B. Foley, St. Paul, read a paper on "Aseptic Ureterosigmoidostomy." Discussed by Nelse F. Ockerblad, Kansas City, Mo.

Dr. John H. Morrissey, New York, read the chairman's address.

Dr. C. A. Owens, Omaha, read a paper on "The Value of Fever Therapy in the Treatment of Gonorrhea."

These two papers were discussed by Drs. L. G. Stuhler, Rochester, Minn.; John K. Ormond, Detroit; Anson L. Clark, Oklahoma City; O. A. Nelson, Seattle; H. L. Kretschmer, Chicago, and C. A. Owens, Omaha.

Dr. Gershom J. Thompson, Rochester, Minn., read a paper on "Transurethral Surgery: Changing Conceptions During the Past Five Years."

Dr. N. G. Alcock, Iowa City, read a paper on "Results of Transurethral Prostatic Resection."

These two papers were discussed by Drs. George R. Livermore, Memphis, Tenn.; H. L. Kretschmer, Chicago; William J. Engel, Cleveland; Louis M. Orr Jr., Orlando, Fla.; A. G. Fleischman, Des Moines, Iowa; John F. Patton, St. Louis; Otto J. Wilhelmi, St. Louis; Hermon C. Bumpus Jr., Pasadena, Calif.; Charles J. McDevitt, Cincinnati; Gershom J. Thompson, Rochester, Minn., and N. G. Alcock, Iowa City.

Dr. Vincent J. O'Conor, Chicago, read a paper on "Intraprostatic Injection: An Experimental Study by Vincent O'Conor and Robert L. Ladd." Discussed by Drs. Earl Ewert, Chicago, and Vincent J. O'Conor, Chicago.

FRIDAY, MAY 15—AFTERNOON

The following officers were elected: chairman, Henry W. E. Walther, New Orleans; vice chairman, Nelse F. Ockerblad, Kansas City, Mo.; secretary, William P. Herbst Jr., Washington, D. C.; delegate, Hermon C. Bumpus Jr., Pasadena, Calif.; executive committee, John H. Morrissey, New York; Stanley R. Woodruff, Jersey City, N. J., and Henry W. E. Walther, New Orleans.

The following papers were read as a symposium on "Sterility."

Dr. Richard Chute, Boston: "Endocrine Factors in Sterility." Discussed by Drs. Moses Swick, New York, and Richard Chute, Boston.

Dr. Samuel R. Meaker, Boston: "The Gynecologic Aspect of Human Sterility."

Dr. Robert S. Hotchkiss, New York: "Methods of Sperm Analysis, with the Valuation of Therapeutic Procedures."

Dr. Francis R. Hagner, Washington, D. C.: "Plastic Operative Treatment for Relief of Sterility in the Male."

These three papers were discussed by Drs. Victor D. Lespinasse, Chicago; Lawrence R. Wharton, Baltimore; Miley B. Wesson, San Francisco; J. H. Turner, Houston, Texas; Samuel R. Meaker, Boston; Robert S. Hotchkiss, New York, and Francis R. Hagner, Washington, D. C.

Dr. Jesse Ullman Reaves, Mobile, Ala., read a paper on "Granuloma Inguinale vs. Lymphogranuloma Inguinale." Discussed by Drs. H. T. Hayes, Houston, Texas; J. H. Turner, Houston, Texas; Max S. Wien, Chicago; Paul R. Stalnaker, Houston, Texas; Victor D. Lespinasse, Chicago, and Jesse Ullman Reaves, Mobile, Ala.

Dr. M. A. Nicholson, Duluth, Minn., read a paper on "Analysis of Indications for and Results of Cystoscopic Examination." Discussed by Dr. R. W. Barnes, Los Angeles.

SECTION ON ORTHOPEDIC SURGERY

WEDNESDAY, MAY 13—AFTERNOON

The meeting was called to order at 2:05 by the chairman, Dr. Arthur T. Legg, Boston.

Dr. J. Albert Key, St. Louis, read a paper on "Results Obtained by the Subcutaneous Fixation of Fractures of the Neck of the Femur." Discussed by Drs. Edwin W. Ryerson, Chicago; Fred Knowles, Fort Dodge, Iowa; Fred J. Gaenslen, Milwaukee; Kellogg Speed, Chicago, and J. Albert Key, St. Louis.

Dr. Joseph I. Mitchell, Memphis, Tenn., read a paper on "Fractures of the Neck of the Femur in Children." Discussed by Drs. Paul C. Colonna, New York; S. L. Haas, San Francisco; Ralph G. Carothers, Cincinnati, and Joseph I. Mitchell, Memphis, Tenn.

Dr. Paul B. Magnuson, Chicago, read a paper on "The Evaluation of the Various Methods of Treatment Advanced for Fractures of the Neck of the Femur." Discussed by Drs.

Frank D. Dickson, Kansas City, Mo.; Willis C. Campbell, Memphis, Tenn.; C. Fred Ferciot, Lincoln, Neb.; J. Albert Key, St. Louis; Laurence Jones, Kansas City, Mo., and Paul Magnuson, Chicago.

Dr. Albert B. Ferguson, New York, read a paper on "A New Lateral Roentgenogram of the Femoral Neck." Discussed by Drs. Fred J. Gaenslen, Milwaukee; S. Perry Rogers, Chicago, and Albert B. Ferguson, New York.

Dr. Arthur T. Legg, Boston, read the chairman's address, entitled "The Early Orthopedic Treatment of Poliomyelitis."

Dr. Fred H. Albee, New York, read a paper on "Massive Resection and Bone Graft Replacement in Sarcoma of the Long Bone." Discussed by Dr. Arthur Steindler, Iowa City.

Thursday, May 14—Afternoon

Dr. Marcus H. Hobart, Evanston, Ill., read a paper on "Osteomyelitis at Cook County Hospital, with an Appraisal of Orr's Treatment." Discussed by Drs. R. J. Dittrich, Fort Scott, Kan.; Jacob Kulowski, St. Joseph, Mo.; J. E. M. Thomson, Lincoln, Neb.; Edwin W. Ryerson, Chicago; John Prentiss Lord, Omaha, and Marcus H. Hobart, Evanston, Ill.

Dr. Carl E. Badgley, Ann Arbor, Mich., read a paper on "Osteomyelitis of the Ilium, Acute and Chronic." Discussed by Drs. W. B. Carrell, Dallas, Texas, and Carl E. Badgley, Ann Arbor, Mich.

Dr. Guy A. Caldwell, Shreveport, La., read a paper on "Osteomyelitis of the Spine." Discussed by Dr. M. E. Pusitz, Topeka, Kan.

Dr. Robert C. Robertson, Chattanooga, Tenn., read a paper on "Acute Hematogenous Osteomyelitis: An Analysis of Seventy-Five Cases." Discussed by Drs. Edwin W. Ryerson, Chicago; Joseph I. Mitchel, Memphis, Tenn.; Robert L. Preston, New York; James B. Weaver, Kansas City, Mo., and Robert C. Robertson, Chattanooga, Tenn.

Drs. John C. Wilson and Francis M. McKeever, Los Angeles, presented a paper on "Growth Changes in Bone as a Result of Osteomyelitis in Children." Discussed by Dr. D. B. Phemister, Chicago.

Dr. Sylvan L. Haas, San Francisco, read a paper on "Late Infection Following the Use of Wire and Pins in Bone." Discussed by Drs. Roger Anderson, Seattle; W. K. West, Oklahoma City, and Sylvan L. Haas, San Francisco.

Friday, May 15—Afternoon

The following officers were elected: chairman, Dr. Fremont A. Chandler, Chicago; vice chairman, Dr. John Dunlop, Pasadena, Calif.; secretary, Dr. Robert V. Funsten, University, Va.; delegate, Dr. Henry W. Meyerding, Rochester, Minn.; alternates: Drs. Roland Hammond, Providence, R. I.; James S. Speed, Memphis, Tenn.; executive committee: Drs. Robert D. Schrock, Omaha; Arthur T. Legg, Boston; Fremont A. Chandler, Chicago.

Dr. Fremont A. Chandler, Chicago, was continued as a member of the American Board of Orthopedic Surgery.

The report of the secretary was given by Dr. Robert V. Funsten and was adopted.

Dr. Joseph S. Barr, Boston, read a paper on "Tuberculosis of the Hip in Children." Discussed by Drs. Arthur Steindler, Iowa City; John C. Wilson, Los Angeles; Halford Hallock, New York, and Joseph S. Barr, Boston.

Dr. Melvin S. Henderson, Rochester, Minn., read a paper on "The Massive Bone Graft." Discussed by Drs. Oscar L. Miller, Charlotte, N. C.; Fremont A. Chandler, Chicago; W. K. West, Oklahoma City, and Melvin S. Henderson, Rochester, Minn.

Drs. Samuel Kleinberg and Joseph Buchman, New York, presented a paper on "The Operative versus the Manipulative Treatment of Slipped Femoral Epiphysis, with a Description of a Curative Operation." Discussed by Dr. Samuel Kleinberg, New York.

Drs. Louis B. Laplace and Jesse T. Nicholson, Philadelphia, presented a paper on "The Physiologic Effects of the Correction of Faulty Posture." Discussed by Dr. John G. Kuhns, Boston.

Dr. Arthur G. Davis, Erie, Pa., read a paper on "A Conservative Treatment of Habitual Dislocations of the Shoulder." Discussed by Drs. Edson B. Fowler, Evanston, Ill., and Arthur G. Davis, Erie, Pa.

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

Wednesday, May 13—Morning

The meeting was called to order at 9 o'clock by the chairman, Dr. Ernest H. Gaither, Baltimore.

The chairman read the following letter from Dr. Anthony Bassler, New York:

Nov. 20, 1935.

At the next meeting of the section, please submit the following. After its adoption kindly send me the name of the person who is selected.

A suitable resolution would be:

The International Society of Gastro-Enterology is forming an American committee to select and communicate with those who are to be the members from this country. The committee is being made up by representatives of the various gastro-enterologic organizations in the United States. Among these is the Section on Gastro-Enterology and Proctology of the American Medical Association. Thus far those on the committee request the section to select and appoint a representative to this committee, if possible one who is not a member of other gastro-enterologic organizations.

On motion made by Dr. Louis J. Hirschman, Detroit, seconded by Dr. Descum C. McKenney, Buffalo, it was voted that for clarification the matter be referred through the section delegate, Dr. Curtice Rosser, Dallas, Texas, to the House of Delegates of the American Medical Association, for information and report back on Friday morning, May 15, since the invitation was issued to a constituent part of the American Medical Association.

Dr. Descum C. McKenney, Buffalo, read a paper on "Multiple Polyposis of Colon, Familial Factor and Malignant Tendency." Discussed by Drs. John J. Corbett, Detroit; Thomas E. Jones, Cleveland, and Descum C. McKenney, Buffalo.

Drs. Charles W. Mayo and E. G. Wakefield, Rochester, Minn., presented a paper on "Disseminated Polyposis of the Colon." Discussed by Drs. Frank H. Lahey, Boston; Walter A. Fansler, Minneapolis; H. W. Soper, St. Louis, and E. G. Wakefield, Rochester, Minn.

Dr. H. W. Soper, St. Louis, read a paper on "Clinical Significance of Indicanuria." Discussed by Drs. A. L. Levin, New Orleans; H. W. Soper, St. Louis, and E. G. Wakefield, Rochester, Minn.

Dr. Nelson G. Russell, Buffalo, read a paper on "The Relation of Gastro-Enterology to General Medicine." Discussed by Drs. George B. Eustermann, Rochester, Minn., and Nelson G. Russell, Buffalo.

Drs. Russell S. Boles and Jefferson H. Clark, Philadelphia, presented a paper on "Alcohol and Cirrhosis of the Liver: Clinical and Pathologic Considerations." Discussed by Drs. Leonard G. Rowntree, Philadelphia; Harry L. Bockus, Philadelphia, and Russell S. Boles, Philadelphia.

Drs. David R. Meranze and Maurice M. Rothman, Philadelphia, presented a paper on "The Relationship of the Plasma Phosphatase Value in the Blood in the Differential Diagnosis of Obstructive and Hepatocellular Jaundice." Discussed by Drs. Leonard G. Rowntree, Philadelphia; J. Russell Twiss, New York, and Maurice M. Rothman, Philadelphia.

Drs. Harry L. Bockus and Henry J. Tumen, Philadelphia, presented a paper on "Serum Proteins in Hepatic Diseases." Discussed by Dr. Manfred W. Comfort, Rochester, Minn.

Thursday, May 14—Morning

Dr. Ernest H. Gaither, Baltimore, read the chairman's address, entitled "Recent Advances in Gastro-Enterology."

Drs. Rudolf Schindler, Marie Ortmayer and John F. Renshaw, Chicago, presented a paper on "Chronic Gastritis." Discussed by Drs. William Carpenter MacCarty, Rochester, Minn.; Leon Bloch, Chicago; George B. Eusterman, Rochester, Minn., and Rudolf Schindler, Chicago.

Dr. Warren T. Vaughan, Richmond, Va., read a paper on "The Leukopenic Index as a Diagnostic Method in the Study of Food Allergy." Discussed by Drs. L. P. Gay, St. Louis; Herbert J. Rinkel, Kansas City, Mo.; Albert H. Rowe, Oakland, Calif., and Warren T. Vaughan, Richmond, Va.

Drs. C. C. Tucker and C. A. Hellwig, Wichita, Kan., presented a paper on "The Etiology of Pruritus Ani: Clinical and Histologic Manifestations in Forty-Three Cases." Discussed by Drs. Harry E. Bacon, Philadelphia; Curtice Rosser, Dallas, Texas; Hamilton Montgomery, Rochester, Minn.; Louis J. Hirschman, Detroit; Victor C. Tucker, San Antonio, Texas; G. S. Hanes, Louisville, Ky., and C. C. Tucker, Wichita, Kan.

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Dr. Marion C. Pruitt, Atlanta, Ga., read a paper on "The Surgical Treatment of Pruritus Ani." Discussed by Drs. Harvey B. Stone, Baltimore; Louis J. Hirschman, Detroit; G. S. Hanes, Louisville, Ky., and Marion C. Pruitt, Atlanta.

Dr. George B. Eusterman, Rochester, Minn., read a paper on "The Clinical Significance of Negative Roentgen Examinations in Patients with Chronic Dyspepsia." Discussed by Drs. Edward H. Skinner, Kansas City, Mo., Nelson G. Russell, Buffalo, and Rudolf Schindler, Chicago.

FRIDAY, MAY 15—MORNING

The following officers were elected: chairman, Dr. Louis A. Buie, Rochester, Minn.; vice chairman, Dr. Harry L. Bockus, Philadelphia; secretary, Dr. A. H. Aaron, Buffalo; executive committee: Dr. Walter A. Fansler, Minneapolis; Dr. Ernest H. Gaither, Baltimore, and Dr. Louis A. Buie, Rochester, Minn. Delegate, Dr. Curtice Rosser, Dallas, Texas; alternate, Dr. Frank G. Runyeon, Reading, Pa.; chairman of Committee on Section Exhibit, Dr. J. Arnold Bargen, Rochester, Minn.

Dr. Curtice Rosser, Dallas, Texas, made his report as delegate to the House of Delegates. On motion made by Dr. Louis A. Buie, Rochester, Minn., seconded by Dr. Bernard Sachs, Omaha, it was voted to accept the report.

On motion made by Dr. Curtice Rosser, Dallas, seconded by Dr. Sara M. Jordan, Boston, the following resolution was adopted:

WHEREAS, The International Society of Gastro-Enterology is forming an American committee to select and communicate with those who are to be the members from this country, and this committee is being made up by representatives of the various gastro-enterologic organizations in the United States, among these being the Section on Gastro-Enterology and Proctology of the American Medical Association, and those on the committee having requested the section to select and appoint a representative to this committee; it is hereby

Resolved, That this section, through its present chairman, appoint such a representative.

Dr. Henry A. Rafsky, New York, was appointed a member of the American Committee of the International Society of Gastro-Enterology, in accordance with the foregoing resolution.

On motion made by Dr. Russell S. Boles, Philadelphia, seconded by Dr. Louis A. Buie, Rochester, Minn., it was voted to reimburse Dr. A. F. R. Andresen, Brooklyn, for one half of his expenses in connection with the establishment of the American Board of Gastro-Enterology.

On motion made by Dr. A. F. R. Andresen, Brooklyn, seconded by Dr. Sidney A. Portis, Chicago, and many others, it was voted that the secretary send to Dr. Frank Smithies, Chicago, the greetings of the section, an expression of appreciation for all he has done for medicine, gastro-enterology and the Section on Gastro-Enterology and Proctology of the American Medical Association, and wishing him a speedy recovery.

Dr. Louis J. Hirschman, Detroit, read a paper on "The Importance of Routine Examination of the Colon." Discussed by Dr. Descum C. McKenney, Buffalo.

Dr. Samuel Morein, Providence, R. I., read a paper on "Diaphragmatic Hernia: Symptomatology, Diagnosis and Treatment." Discussed by Drs. I. R. Jankelson, Boston; Harry A. Singer, Chicago, and Samuel Morein, Providence, R. I.

Dr. Sara M. Jordan, Boston, read a paper on "A Review of the Gastric Ulcer Problem." Discussed by Drs. Russell S. Boles, Philadelphia; Sidney A. Portis, Chicago; Henry A. Rafsky, New York; Walter L. Palmer, Chicago; William Carpenter MacCarty, Rochester, Minn., and Sara M. Jordan, Boston.

Dr. Frank D. Gorham, St. Louis, read a paper on "Treatment of Intractable Peptic Ulcer by Intramuscular Injections of Metallic Bismuth."

Dr. David J. Sandweiss, Detroit, read a paper on "Comparative Value of Dietetic, Surgical and Parenteral Treatment in Peptic Ulcer."

These two papers were discussed by Drs. A. F. R. Andresen, Brooklyn; Sara M. Jordan, Boston; George B. Eusterman, Rochester, Minn.; Italo F. Volini, Chicago; Russell S. Boles, Philadelphia, and John H. Fitzgibbon, Portland, Ore.

Dr. G. V. Brindley, Temple, Texas, read a paper on "Carcinoma of the Rectum: Factors Affecting Its Cure." Discussed by Drs. Curtice Rosser, Dallas, Texas; Fred W. Rankin, Lexington, Ky., and G. V. Brindley, Temple, Texas.

Dr. J. W. Thompson, St. Louis, read a paper on "Secondary Resections in Recurring Carcinoma of the Colon." Discussed by Drs. C. J. Hunt, Kansas City, Mo., and C. F. Dixon, Rochester, Minn.

SECTION ON RADIOLOGY

WEDNESDAY, MAY 13—MORNING

The meeting was called to order at 8:55 by the chairman, Dr. Edward L. Jenkinson, Chicago.

Dr. Albert Soiland, Los Angeles, delegate from the section to the House of Delegates of the American Medical Association, read the following report of the Reference Committee on Sections and Section Work:

With respect to the resolution presented by Dr. Albert Soiland, of the Section of Radiology, and adopted by the Section on Radiology, as follows:

WHEREAS, The answers published in the Department of Queries and Minor Notes of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, being unsigned, are readily construed as representing the official opinion of the American Medical Association, thus giving them a standing and authority which would otherwise not obtain; and

WHEREAS, The answers are obviously on occasion merely the expression of individual opinion and should be interpreted in the light of that fact; and

WHEREAS, Without such interpretation the answers are misleading and deceptive and capable of working a serious injustice to many who may hold opinions at variance with those expressed; therefore be it

Resolved, That the Section on Radiology of the American Medical Association recommends to the House of Delegates that appropriate steps be taken to make plain to the casual readers of THE JOURNAL the status of and responsibility for the answers published in the Department of Queries and Minor Notes.

Your committee is reliably informed that the Department of Queries and Minor Notes of THE JOURNAL is one of the most popular features of our official organ, eagerly consulted by the rank and file of our membership. Your committee is further informed that the answers to questions appearing in this section of THE JOURNAL are furnished by a group of outstanding men selected because of their familiarity with the particular problems raised by the questioner. Notwithstanding, your committee, after consultation with the editor of THE JOURNAL, recommends that in the future there be inscribed at the head of this section of THE JOURNAL a statement setting forth that the answers given to the queries, although believed to be scientifically accurate, do not represent the consensus of any official body of the Association, unless so stated in the answer.

Dr. Soiland read the following report of the Reference Committee on Medical Education, regarding resolutions of Drs. F. F. Borzell, Philadelphia, and Albert Soiland, Los Angeles, regarding the practice of radiology and its division into professional and technical services and the resolution of the California Medical Association regarding other technical and professional services:

We recommend as follows:

1. We reiterate the principle enunciated by the House of Delegates at Cleveland in 1934 "that the practice of radiology, whether for diagnostic or therapeutic purposes, constitutes the practice of medicine." The action of the House of Delegates in 1925 establishing a section on radiology confirms this principle.

2. We further recommend that all services connected with the practice of radiology be under the direct control and supervision of the medical profession, and this same principle pertains to other technical and professional services.

Dr. Edward L. Jenkinson, Chicago, read the chairman's address, entitled "Cholecystography."

The following papers were read as a "Gastro-Intestinal Symposium":

Dr. Hollis E. Potter, Chicago: "The Use of Pressure Devices in X-Ray Diagnosis of Peptic Ulcer."

Drs. William J. Hoffman and George T. Pack, New York: "Cancer of the Duodenum: A Clinical and Radiologic Study of Sixteen Cases."

Dr. E. P. Pendergrass, Philadelphia: "Some Observations on the Physiology and Pathology of the Small Intestine."

Dr. James T. Case, Chicago: "Comparison of Methods of Roentgen Examinations of the Colon."

These four papers were discussed by Drs. B. R. Kirklin, Rochester, Minn.; Harry M. Weber, Rochester, Minn.; E. V. Powell, Temple, Texas; Ross Golden, New York; Hollis E. Potter, Chicago, and James T. Case, Chicago.

Drs. Sherwood Moore and Wendell G. Scott, St. Louis, presented a paper on "Roentgenkymography: Its Clinical and

Physiologic Value in Diseases of the Heart and Chest." Discussed by Dr. M. C. Sosman, Boston.

THURSDAY, MAY 14—MORNING

Dr. Wilbur Bailey, Los Angeles, read a paper on "Anomalies and Fractures of the Vertebral Articular Processes."

Dr. W. Warner Watkins, Phoenix, Ariz., read a paper on "Bony Anomalies in Wrist and Foot."

These two papers were discussed by Drs. Arthur Steindler, Iowa City; Fremont A. Chandler, Chicago; Leo G. Rigler, Minneapolis; Wilbur Bailey, Los Angeles, and W. Warner Watkins, Phoenix, Ariz.

The following papers were read as a symposium on "Lymph Gland Pathology":

Dr. Plinn F. Morse, Detroit: "Classification of Lymph Node Enlargements."

Dr. B. K. Wiseman, Columbus, Ohio: "The Character and Significance of the Blood Picture in the Lymphadenopathies."

Dr. F. W. O'Brien, Boston: "The Roentgen Treatment of the So-Called Malignant Lymphomas."

Dr. Leo G. Rigler, Minneapolis: "Leukemia of the Stomach Producing Hypertrophy of the Gastric Mucosa."

These four papers were discussed by Drs. Ross Golden, New York; Israel Davidsohn, Chicago; B. K. Wiseman, Columbus, Ohio, and F. W. O'Brien, Boston.

FRIDAY, MAY 15—MORNING

The following officers were elected: chairman, Dr. Ross Golden, New York; vice chairman, Dr. B. R. Kirklin, Rochester, Minn.; secretary, Dr. John T. Murphy, Toledo, Ohio; executive committee: Dr. John W. Pierson, Baltimore; Dr. Edward L. Jenkinson, Chicago; Dr. Ross Golden, New York; delegate, Dr. E. H. Skinner, Kansas City, Mo.; alternate, John W. Pierson, Baltimore; member of the Board of Radiology, Dr. Lyell C. Kinney, San Diego, Calif.; delegate to the fifth International Congress of Radiology, Dr. W. F. Manges, Philadelphia; alternate, Dr. John T. Murphy, Toledo, Ohio.

It was moved that the House of Delegates of the American Medical Association be petitioned to permit the Section on Radiology to form a committee for the purposes of classifying hospitals as to their departments of radiology. The motion was lost for want of a second.

Dr. James F. Kelly, Omaha, read a paper on "The Present Status of the X-Rays as an Aid in the Treatment of Gas Gangrene." Discussed by Drs. E. H. Skinner, Kansas City, Mo.; John J. Faust, Tyler, Texas; W. Warner Watkins, Phoenix, Ariz., and James F. Kelly, Omaha.

Drs. Fred M. Hodges and R. A. Bergeir, Richmond, Va., presented a paper on "Roentgen Therapy of Some Acute, Subacute and Chronic, More or Less Localized Infections." Discussed by Drs. Edward H. Skinner, Kansas City, Mo.; F. F. Borzell, Philadelphia; J. James Duffy, Denison, Iowa; L. R. Sante, St. Louis; W. Edward Chamberlain, Philadelphia; Leo G. Rigler, Minneapolis; Rollin H. Stevens, Detroit; William H. Sargent, Oakland, Calif., and R. A. Berger, Richmond, Va.

Drs. J. Cash King and Leo C. Harris Jr., Memphis, Tenn., presented a paper on "Cystic Disease of the Lung." Discussed by Drs. L. R. Sante, St. Louis; James L. Dubrow, Des Moines, Iowa; Carleton B. Peirce, Ann Arbor, Mich.; Leo G. Rigler, Minneapolis, and J. Cash King, Memphis, Tenn.

Dr. Robert P. Ball, Chattanooga, Tenn., read a paper on "Needle (Aspiration) Biopsy of Bone Lesions." Discussed by Dr. Harold G. F. Edwards, Shreveport, La.

Drs. Carleton B. Peirce and Isadore Lampe, Ann Arbor, Mich., presented a paper on "Giant Cell Bone Tumor: Further Observations on the Response to Surgical and Radiation Therapy."

SECTION ON MISCELLANEOUS TOPICS

Session on Tuberculosis

WEDNESDAY, MAY 13—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. James Alexander Miller, New York, who stated that the session was being held as an experiment to determine the demand felt by the members for having a special section of the American Medical Association on tuberculosis.

Dr. James Alexander Miller, New York, read the chairman's address, entitled "Resistance in Tuberculosis."

Dr. Max Pinner, Oneonta, N. Y., read a paper on "Pathogenesis of Tuberculosis."

These two papers were discussed by Drs. Henry C. Sweany, Chicago; F. M. Pottenger Sr., Monrovia, Calif.; James Alexander Miller, New York, and Max Pinner, Oneonta, N. Y.

Dr. J. Burns Amberson Jr., New York, read a paper on "Case Finding Methods and Early Diagnosis in Tuberculosis." Discussed by Drs. George H. Hoxie, Kansas City, Mo.; William Devitt, Allenwood, Pa.; Sam H. Snider, Kansas City, Mo.; H. I. Spector, St. Louis, and J. Burns Amberson Jr., New York.

Dr. Le Roy S. Peters, Albuquerque, N. M., read a paper on "Sanatorium Care of the Tuberculous." Discussed by Drs. A. M. Forster, Colorado Springs, Colo.; C. M. Hendricks, El Paso, Texas (read by Secretary Charles H. Cocke, Asheville, N. C.), and Victor Strong Randolph, Phoenix, Ariz.

Dr. J. J. Singer, St. Louis, read a paper on "Collapse Therapy in Pulmonary Tuberculosis." Discussed by Drs. J. W. Cutler, Philadelphia; O. E. Egbert, El Paso, Texas, and J. J. Singer, St. Louis.

THE SCIENTIFIC EXHIBIT

The Scientific Exhibit at the Kansas City session was characterized by the devotion with which the demonstrators in the various booths remained at their tasks under difficult circumstances and the continuous and sustained interest shown by the ever present crowds in the aisles. There were 150 exhibits prepared by individuals under the auspices of the various sections of the Scientific Assembly; twenty exhibits in the Educational Classification were prepared by national organizations and government agencies; there were four exhibits from the headquarters of the American Medical Association and two special exhibits subsidized by the Board of Trustees.

The special exhibit on diabetes was presented under the auspices of the following committee: E. P. Joslin, chairman, Boston; Charles H. Best, Toronto; Louis I. Dublin, New York; Ralph H. Major, Kansas City, Mo.; Howard F. Root, Boston; Bertnard Smith, Los Angeles, and Russell M. Wilder, Rochester, Minn., with the assistance of Cecil Striker, Shields Warren, Alexander Marble and C. N. H. Long. In addition, thirty-four physicians gave short talks on the subject of diabetes in a room adjoining the exhibits, where also motion pictures on diabetes were shown at various intervals during the week.

The special exhibit on fractures was presented under the auspices of a committee consisting of Kellogg Speed, chairman, Chicago; Frank D. Dickson, Kansas City, Mo., and Walter Estell Lee, Philadelphia, assisted by an advisory committee consisting of Isidore Cohn, New Orleans; H. Earle Conwell, Birmingham, Ala.; Frederic J. Cotton, Boston; William Darrach, New York; Richard B. Dillehunt, Portland, Ore.; Eldridge L. Eliason, Philadelphia; Leo Eloesser, San Francisco; George W. Hawley, Bridgeport, Conn.; Melvin S. Henderson, Rochester, Minn.; James M. Hitzrot, New York; William L. Keller, Washington, D. C.; Roy D. McClure, Detroit; Frank R. Ober, Boston; Dallas B. Phemister, Chicago; J. Spencer Speed, Memphis, Tenn., and John C. Wilson, Los Angeles. Fifty-two physicians from various parts of the country assisted with the demonstrations. Acknowledgment is made to the Surgeon General of the United States Army and to Col. E. M. Blanchard and men from Station Hospital, Kansas City, for the very efficient service which they rendered in connection with the fracture exhibit. Appreciation is also expressed to the management of St. Luke's Hospital, Kansas City, for the cooperation rendered in furnishing nurses and supplies for the exhibit.

Other features of the Kansas City session included a small group of exhibits on traffic accidents, stressing especially emer-

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gency treatment; a group of fifteen exhibits from the University of Kansas School of Medicine, presenting a wide range of subjects, and motion picture programs by the Section on Ophthalmology and by the Section on Orthopedic Surgery, shown in spaces adjoining the exhibits of those two sections.

Thirty-eight papers read before the various sections of the Scientific Assembly were also accompanied by material in the Scientific Exhibit, thus giving an opportunity to the individuals who had heard the papers to consult the authors and go over the work at leisure.

REPORT OF THE COMMITTEE ON AWARDS

The Committee on Awards made the following report:

CLASS I

[Awards in Class I are made for exhibits of individual investigation, which are judged on the basis of originality and excellence of presentation.]

The gold medal to Charles B. Huggins, W. J. Noonan and B. H. Blocksom, Department of Surgery, University of Chicago, Chicago, for original investigation on the distribution of red and yellow bone marrow and the reticulo-endothelial system in the bone marrow.

The silver medal to G. C. Supplee and S. Anshacher, Research Division, The Borden Company, New York, for original investigations on the development of pure lactoflavin, an entity of the water soluble vitamin B complex.

The bronze medal to Alvan L. Barach, Presbyterian Hospital, New York, for original investigations on the rôle of helium and oxygen in various types of dyspnea.

Certificates of merit, Class I, are awarded to the following (alphabetically arranged):

Arthur F. Abt, Chester J. Farmer and Elizabeth Smith, Northwestern University Medical School, Chicago, for exhibit illustrating the metabolism of cevitamic acid of infants and children.

Frederic A. Gibbs, William G. Lennox, Hallowell Davis, Erna L. Gibbs and Albert Grass, Harvard Medical School, Boston, for exhibit illustrating the electro-encephalograph and its application to the study of epilepsy.

Wendell G. Scott and Sherwood Moore, Edward Mallinckrodt Institute of Radiology, Washington University School of Medicine, St. Louis, for exhibit illustrating the clinical and physiologic value of kymography in diseases of the heart and chest.

Phillips Thygeson and Francis I. Proctor, University of Iowa, Iowa City, for exhibit illustrating the differential diagnosis of trachoma.

In addition, the following exhibits are deemed worthy of honorable mention (alphabetically arranged):

That of Archibald L. Hoyne, Municipal Contagious Disease Hospital, Board of Health and Cook County Hospital, Chicago, and N. S. Ferry, Parke, Davis and Company, Detroit, for an exhibit on meningococcus antitoxin in the treatment of epidemic meningitis.

That of H. O. Mahoney and Barry J. Anson, Northwestern University Medical School, Chicago, for an exhibit illustrating a radiographic study of anatomic sections.

That of O. H. Robertson and W. D. Sutliff, Department of Medicine, University of Chicago, Chicago, for an exhibit illustrating the results of a clinical and experimental study of the lesion of lobar pneumonia.

CLASS II

[Awards in Class II are made for exhibits which do not exemplify purely experimental studies and which are judged on the basis of excellence of presentation.]

The gold medal to Rudolf Schindler, Marie Ortmayer and John F. Renshaw, University of Chicago, Chicago, for excellence of presentation of an exhibit on chronic gastritis as studied by gastroscopy.

The silver medal to John O. Bower, J. C. Burns and H. A. Mengle, Department of Research Surgery, Temple University School of Medicine and General Hospital, Philadelphia, for an exhibit illustrating the treatment of spreading peritonitis complicating acute appendicitis.

The bronze medal to Hamilton Montgomery, Mayo Clinic, Rochester, Minn., for excellence of presentation of an exhibit illustrating the histopathology of various types of cutaneous tuberculosis.

Certificates of merit, Class II, are awarded to the following (alphabetically arranged):

R. Russell Best, N. Frederick Hicken and Howard B. Hunt, Departments of Anatomy, Surgery and Roentgenology, University of Nebraska College of Medicine, Omaha, for excellence of presentation of an exhibit illustrating cholangiographic studies of the gallbladder and biliary ducts.

W. James Gardner, Neurosurgical Division, Cleveland Clinic, Cleveland, for excellence of presentation of an exhibit on hereditary brain tumors.

George Levene and Henry H. Lerner, Robert Dawson Evans Memorial for Clinical Research and Preventive Medicine, Massachusetts Memorial Hospitals, Boston, for excellence of presentation of an exhibit illustrating the roentgenoscopic appearance of the heart.

W. Eugene Wolcott, Des Moines, Iowa, for excellence of presentation of an exhibit illustrating circulation in the head and neck of the femur.

HONORABLE MENTION

In addition, the following exhibits are deemed worthy of honorable mention (alphabetically arranged):

That of E. C. Hamblen and B. Carter, Department of Obstetrics and Gynecology, Duke University Hospital and School of Medicine, Durham, N. C., for an exhibit on studies of the endometrium in functional abnormalities of menstruation and its response to endocrine therapy.

That of Bayard T. Horton, George E. Brown (deceased) and Grace Roth, Mayo Foundation for Medical Education and Research, Rochester, Minn., for an exhibit on hypersensitiveness to cold.

A special certificate of merit is awarded to the New York State Institute for the Study of Malignant Diseases, Buffalo, for its exhibit on cancer.

In addition, the exhibit of the Advisory Board for Medical Specialties and of the American Society for the Control of Cancer are deemed worthy of honorable mention.

SPECIAL COMMENDATIONS

Particular commendation is made of the remarkable exhibit by members of the Mayo Clinic, Rochester, Minn., on diseases of the thyroid gland.

Special commendation is also made of the exhibit by the University of Kansas School of Medicine; of the exhibit on undulant fever by the United States Public Health Service; of the exhibit on screw worm myiasis of man and animals by the Bureau of Entomology and Plant Quarantine of the United States Department of Agriculture; of the exhibit on color photography by the Army Medical Museum, Washington, D. C.

The Committee commends especially the many individual exhibitors who have developed exhibits from their own resources and have taken a constant and active part in demonstrating their exhibits to visitors.

SPECIAL EXHIBITS (SUBSIDIZED)

The Committee on Awards particularly commends the special exhibits sponsored by the American Medical Association and expresses grateful appreciation to Dr. E. P. Joslin and his committee for the comprehensive exhibit and demonstrations on diabetes, and to Dr. Kellogg Speed and his committee for the instructive exhibit on fractures with practical demonstrations.

RECOMMENDATIONS

The Committee on Awards believes that the method of correlating the Scientific Exhibit with the Scientific Assembly by the appointment of section exhibit representatives is of advantage and should be continued.

The Committee appreciates the difficulties encountered in securing proper accommodations for the Scientific Exhibit; it ventures to recommend, however, that special consideration be given to this problem in future years so that sufficient space may be available to accommodate the increasing number of physicians who visit the exhibit and so that a suitable environment may be secured which will be in keeping with the high standard of the exhibits.

The Committee recommends to the Committee on Scientific Exhibit that the present gold medal be known as the Billings Medal and that other medals be designed for the various awards to be known by definite names.

The Committee believes that the American Medical Association owes a debt of gratitude to the Committee on Scientific Exhibit of the Board of Trustees, to the Advisory Committee, and to Dr. Thomas G. Hull, director in charge of the Scientific Exhibit.

The Committee cannot commend too highly the arrangements, general and special, the efficient management, the instructiveness and the scientific as well as practical value of the exhibit. The exhibitors, in many cases at personal sacrifice, present exhibits prepared by modern methods and devices for the illustration of recent advances in the various fields of medicine.

Ludvig Hektoen, Chairman, Chicago.
A. H. Aaron, Buffalo.
Walter Freeman, Washington, D. C.
Thomas Parran Jr., Washington, D. C.
W. W. Wasson, Denver.

RESULTS OF THE GOLF TOURNAMENT

Two hundred and nine medical golfers from all parts of the United States played the interesting Mission Hills and the Kansas City Country Club courses in Kansas City on the occasion of the twenty-second annual tournament of the American Medical Golfing Association, Monday, May 11. Most of the entrants played thirty-six holes, enjoying eighteen over one course in the morning and the second round over the other links in the afternoon. Perfect weather was scored and all records were broken with a maximum attendance, greatest number of prizes and lowest championship scores. The 110 trophies and prizes were awarded after the golfers' dinner at Mission Hills club house, presided over by Dr. M. M. Cullom of Nashville, Tenn., president of the A. M. G. A. Dr. Clarence Capell of Kansas City, chairman of the golf committee, made the presentations. Speakers at the banquet included Drs. Logan Clendening of Kansas City and Ernest Kelley of Omaha.

DR. ROY EMANUEL OF OKLAHOMA IS CHAMPION

The championship was won by Dr. Roy Emanuel of Chickasha, Okla., who turned in an 82-74—156 for the thirty-six holes. He received the famous Will Walter Trophy, named in honor of the organizer and dean of the A. M. G. A. The Handicap Championship was won by Dr. W. C. Scheidt of Celina, Ohio, who bagged the Detroit Trophy, presented by the Detroit hosts in 1916. The Eighteen Hole Championship went to Dr. F. T. Gallagher of Cleveland, who took home the Golden State Trophy; the second prize in this event was won by Dr. W. L. Sucha of Omaha, the third prize by Dr. E. F. DeVilbiss of Kansas City, the fourth prize by Dr. D. W. Darwin of Woodward, Okla., and the fifth prize by Dr. W. J. Woolston of Pasadena, Calif. The Eighteen Hole Handicap Championship was awarded to Dr. C. B. Voigt of Mattoon, Ill., who won the Ben Thomas Trophy, the second prize to Dr. S. B. Berkley of Canton, Ohio, the third prize to Dr. J. J. Ryan of St. Paul, the fourth prize to Dr. W. R. Clinton of Detroit, the fifth prize to Dr. C. N. Linquist of Kansas City and the sixth prize to Dr. Henry Harkins of Chicago.

DRS. CANTRELL AND NICOLL ARE TROPHY WINNERS

The Maturity Event, limited to Fellows over 60 years of age, for the best net score on the first eighteen holes was won by Dr. C. D. Cantrell of Kansas City, who received the Minneapolis Trophy; the second prize went to Dr. J. A. Hendrick of Shreveport, La., the third prize to Dr. W. E. Baker of Des Moines, the fourth prize to Dr. M. M. Cullom of Nashville, the fifth prize to Dr. Walter J. Wilson of Detroit, the sixth prize to Dr. J. P. DeWitt of Canton, Ohio, the seventh prize to Dr. W. D. Black of St. Louis and the eighth prize to Dr. J. B. Sampsell of Van Wert, Ohio.

Dr. Homer K. Nicoll of Chicago, president of the A. M. G. A. in 1934, won the Old Guard Championship, awarded to past-presidents, and received the Wendell Phillips Trophy. Second prize went to Dr. E. G. Zabriskie of New York, president in 1931, and the third prize to Dr. Charles Lukens of Toledo, president in 1935.

SIX FLIGHTS, GROSS AND NET

The Championship Flight low gross was won by Dr. L. W. Pumphrey of Pittsburgh, who gained the St. Louis Trophy. Other winners were Drs. W. F. Manges of Philadelphia, J. P. Loudon of Yakima, Wash., J. L. Lattimore of Topeka, Paul Tipton of Omaha, G. R. Love of Oconomowoc, Wis., and H. T. Jones of Lawrence, Kan. The net prize in this flight went to Dr. D. A. Williams of Kansas City, who won the President's Trophy, a sterling silver pitcher presented by Dr. M. M. Cullom; other winners were Drs. J. D. Fouts of Dayton, J. J. Hovorka of Emporia, G. W. Underwood of Dallas, E. R. Deweese of Kansas City and R. P. Bell of Cleveland.

The First Flight gross winners were Drs. H. L. D. Kirkham of Houston, Texas, D. H. Houston of Seattle, H. M. Roberts of Kansas City, C. D. Snyder of Winfield, Kan., James Greenwood of Houston and Q. O. Gilbert of Oakland, Calif. First prize among the nets was the Chairman's Trophy, presented by Dr. Clarence Capell and won by Dr. O. A. Cowart of Bristow, Okla. Other prizes were won by Drs. E. M. Sutton of Salina, Kan., A. C. Smith of Wooster, Ohio, T. S. Finney of Wichita, W. K. Fast of Atchison, C. V. Edwards of Council Bluffs and F. E. Wrightman of Sabetha, Kan.

The Second Flight gross winners were Drs. D. E. Eggleston of Kingman, Kan., C. P. Rutledge of Shreveport, E. D. Maloney of Omaha, H. S. Browne of Ponca City, Okla., F. G. Mays of Washington, Mo., J. P. Brennan of Pendleton, Ore., and Joseph Hanson of Sarasota, Fla. Net prizes went to Drs. L. M. Otis of Celina, Ohio, O. E. Satter of Prairie du Chien, Wis., J. M. Shaw of Wichita and M. R. Haley of Dayton.

The Third Flight gross winners were Drs. H. A. Gestring of Kansas City, W. S. Larrabee of Tulsa, W. W. Gist of Kansas City, D. A. Duncan of Shreveport, Dan Hogan of Kansas City, J. W. Shirer of Pittsburgh and O. A. Brines of Detroit. Net winners in this flight were Drs. C. A. Nicoll of Panora, Iowa, J. W. Speelman of Pittsburgh, J. M. Lamme of Walsenburg, Colo., J. R. Ripton of Cleveland and P. H. Owens of Kansas City.

Fourth Flight gross winners were Drs. E. N. Gentry of Kansas City, J. J. Caveness of Oklahoma City, A. A. Olson of Wichita, W. J. Feehan of Kansas City, Kan., and H. M. Clark of Platte City, Mo. Winners of the net prizes were Drs. E. W. Shank of Dayton, L. A. O'Brien of Kansas City, E. T. Warren of Stuart, Iowa, J. A. McLaughlin of Greensburg, Kan., and H. L. Charles of Atchison, Kan.

Fifth Flight (net only) winners were Drs. W. J. Ryan of Duluth, J. R. Fowler of Spencer, Mass., E. E. Gingles of Onawa, Iowa, M. C. Green of Omaha, P. C. Quistgard of Kansas City and B. W. Rhamy of Fort Wayne, Ind.

KICKERS' HANDICAP

The Blind Bogey, or Kickers' Handicap, was won by Dr. T. E. Hunt of Paris, Texas, who bagged the Milwaukee Trophy. Winners of the other prizes were Drs. J. E. Hutchinson of Denver, E. O. Baker of Wichita, W. R. Hornaday of Des Moines, L. L. Bresette of Kansas City, Kan., D. F. Byrd of Nashville, W. J. Harrison of Cheyenne, C. A. McGuire of Kansas City, Clayton Andrews of Lincoln, Neb., G. W. Jones of Clovis, N. M., and E. D. Ebright of Wichita.

The officers of the American Medical Golfing Association express thanks to the many friends of the association who helped make the Kansas City tournament such a notable suc-

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cess. They are especially grateful to the Kansas City committee, who arranged all details so efficiently, and to the scores of prize donors, whose generosity is acknowledged.

ELECTION OF OFFICERS

Dr. W. Albert Cook of Tulsa, Okla., was elected president of the A. M. G. A. for the ensuing year; Dr. E. S. Edgerton, Wichita, was chosen first vice president and Dr. Clarence Capell of Kansas City second vice president. Dr. Cullom, retiring president, was made a member of the board of directors. The next tournament will be held in Atlantic City at the time of the 1937 annual session.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ALABAMA

Clinical Society Organized. — Physicians from Mobile, Pensacola, Gulfport and Biloxi met in Mobile recently to organize the Gulf Coast Clinical Society. Dr. William R. Meeker, Mobile, was named chairman of the society and Dr. Mozart A. Lischkoff, Pensacola, secretary-treasurer. The society will hold its first clinical session in October.

CALIFORNIA

Hospital News.—The federal government has appropriated $60,000 to construct a special unit for Indians at Wish-i-ah Sanatorium, Auberry.

Deaths from Cancer Increase.—There were 8,435 cancer deaths registered in California in 1935 as compared with 7,971 in 1934, showing mortality rates, respectively, of 134.4 and 129.4 per hundred thousand of population. Cancer of the digestive tract and peritoneum was recorded in the deaths of 3,949 persons. Cancer of the uterus was second on the list, causing 921 deaths, while cancer of the breast was responsible for 863 deaths.

COLORADO

University News.—Dr. Francis M. Pottenger, Monrovia, Calif., addressed a meeting at the University of Colorado School of Medicine, Denver, May 7, on "Physiological Approach to the Diagnosis and Treatment of Tuberculosis"; the lecture was given under the auspices of the recently inaugurated Phi Rho Sigma Lectureship.

Society News.—The Medical Society of the City and County of Denver was addressed, May 5, by Drs. George B. Kent and Atha Thomas on "Surgical Treatment of Thyroid Diseases" and "Difficult Fractures About the Ankle Joint" respectively. Dr. Clifford Lee Wilmoth, for several years a medical missionary in Ethiopia, gave an address on that country.—— Dr. Jesse W. White, Pueblo, discussed "Thyroid and Pregnancy" before the Pueblo County Medical Society, April 7.—— Dr. Nolie Mumey, Denver, discussed the history of medicine before the Larimer County Medical Society, May 6.—— Dr. Edward R. Phillips, Delta, discussed professional ethics before the Delta County Medical Society, April 24. Dr. Austin E. Miller was elected an honorary member of the society at this meeting; he now lives in McAllen, Texas.

CONNECTICUT

Dr. Long Named Successor to Professor Mendel.—Dr. Cyril N. H. Long, director of the George S. Cox Medical Institute, University of Pennsylvania Hospital, Philadelphia, has been appointed professor of physiologic chemistry at Yale University School of Medicine, New Haven; he succeeds the late Lafayette B. Mendel as chairman of the laboratory of physiologic chemistry. Dr. Long graduated in 1928 from McGill University Faculty of Medicine. In 1932 he was made director of the Cox Institute. Dr. Long is well known for his research on the endocrine glands and on carbohydrate metabolism.

Society News. — At a meeting of the Tri-City Medical Society of Norwich, New London and Willimantic, recently, Dr. Richard B. Cattell, Boston, discussed "Management of Surgical Diseases of the Colon and Rectum."——The New London County Medical Association was addressed April 2 by Dr. Charles F. Wilinsky, Boston, on the economic aspects of medicine.——At a meeting of the radiologic section of the Connecticut State Medical Society in Hartford, April 9, a paper on "Roentgen Diagnosis of Regional Ileitis" was presented by Drs. Douglas J. Roberts and Ralph T. Ogden.—— Dr. George W. Corner, Rochester, N. Y., addressed the Yale Medical Society, May 13, in New Haven, on "The Hormone of the Corpus Luteum." He lectured, May 12, on "Medicine in the Poems of Chaucer."

Health at Hartford. — Telegraphic reports to the U. S. Department of Commerce from eighty-six cities with a total population of 37 million indicate that for the week ended May 23 the highest mortality rate (21.5) appears for Hartford, the rate for the group of cities as a whole being 11.7. The mortality rate for the corresponding period last year was 11.5 for Hartford and 11.6 for the group of cities as a whole. The annual rate for eighty-six cities for the twenty-one weeks of 1936 was 13.4 as against a rate of 12.5 for the corresponding period of the previous year. Caution should be used in the interpretation of these weekly figures, as they fluctuate widely. The fact that some cities are hospital centers for large areas outside the city limits or that they have a large Negro population may tend to increase the death rate.

DISTRICT OF COLUMBIA

Academy of Medicine Formed.—The Academy of Medicine of Washington was organized at a meeting, April 28, "for the advancement of the science of medicine and to promote the mutual exchange of knowledge between medical and other scientific groups." Membership is limited to sixty ordinary resident members and thirty associate and nonresident members and is nonmedical as well as medical in the sense that no special emphasis has been given to the medical degree as compared with the doctor's degree in one of the medical or allied sciences. Since the academy will draw its membership from all medical and associated scientific groups, it will serve as a forum for exchange of ideas and discussion of problems of general interest in medical science. Officers are Dr. William A. White, president; Carl Voegtlin, Ph.D., vice president; Dr. William C. White, treasurer, and Dr. Errett C. Albritton, secretary. Directors are Dr. Aleš Hrdlička, Dr. Sterling Ruffin, Lyman J. Briggs, Ph.D., Dr. Earl B. McKinley and Dr. Matthew W. Perry.

FLORIDA

State Medical Election.—Dr. Edward Jelks, Jacksonville, was chosen president-elect of the Florida Medical Association at its recent annual session aboard the S. S. *Florida*. Dr. Orion O. Feaster, St. Petersburg, was installed as president. The next annual session will be held at St. Petersburg.

ILLINOIS

Outbreak of Dysentery. — The state health department announces that an outbreak of dysentery at Ohio, involving 150 persons, was attributed to a contaminated public water supply. A clogged sewer main caused sewage from the town to back up through an outlet drain into the partly emptied water reservoir. This contaminated water was then pumped into the public supply system.

Personal. — Roger Adams, Ph.D., professor of organic chemistry and head of the department, University of Illinois, Urbana, was presented with the Willard Gibbs medal at a banquet, May 22, given by the Chicago section of the American Chemical Society.——Dr. Samuel P. Colehour has resigned as city health officer of Mount Carroll, and Dr. Lawrence Isenhart has been named to succeed him.——Dr. Walter S. Swan, Harrisburg, was elected to honorary membership in the Saline County Medical Society at a celebration, April 15, in honor of his eighty-second birthday.——Dr. Frederick W. Risser, Strasburg, was given a reception by the local chamber of commerce, April 27, in recognition of his completion of fifty years in the practice of medicine.

Chicago

Society News.—Dr. Clara Jacobson addressed the Chicago Council of Medical Women, June 5, on "Sedimentation Tests in Health and Disease."——At a meeting of the Chicago Club for the Study of Arthritis, June 3, Drs. Eugene F. Traut and Emil G. Vrtiak presented a "Statistical Study of Allergy in Arthritis," and Edwin P. Jordan, "Pathology of Rheumatoid Arthritis."

The Capps Prize.—The Institute of Medicine of Chicago announces that the time limit for submission of manuscripts for the Joseph A. Capps Prize is December 31. The $500 prize will be awarded for meritorious investigation in medicine or in the specialties of medicine; the investigation may be also in the fundamental sciences, provided the work has a definite bearing on some medical problem. Competition is open to graduates of Chicago medical schools who have received the degree of doctor of medicine during the year 1934 or thereafter. Manuscripts should be submitted to the secretary of the Institute of Medicine of Chicago, 122 South Michigan Avenue.

INDIANA

Society News.—At a meeting of the Fountain-Warren Counties Medical Society in Perrysville, May 7, Dr. Wendell D. Little, Indianapolis, discussed "Gallstones and Infection of the Biliary Tract."——Dr. Edward C. Holmblad, Chicago, addressed the Muncie Academy of Medicine in Muncie, May 5, on traumatic surgery.——The Knox County medical and dental societies were addressed in Vincennes, May 5, by Dr. John W. Graves and J. T. Gregory, D.D.S., and Gerald D. Timmons, D.D.S., all of Indianapolis, on "Rôle of the Teeth in Foci of Infection." Dr. Timmons and Dr. James F. Reilly, Vincennes, also discussed Indiana's program for maternal and child health under the Social Security Act.——Dr. William F. Hughes, Indianapolis, was elected president of the Indiana Academy of Ophthalmology and Otolaryngology in Martinsville, April 8, and Dr. Marlow W. Manion, Indianapolis, secretary. The academy changed its constitution so that all future meetings may be held in Indianapolis. Dr. Lee Wallace Dean, St. Louis, was guest speaker on allergic rhinitis.—— Dr. Robert R. Dieterle, Ann Arbor, Mich., discussed "The Duty of the Practicing Physician Toward the Psychoneurotic Patient" at a meeting of the Northeastern Indiana Academy of Medicine in Garrett, April 23.

IOWA

Twin Lakes District Meeting.—The fourteenth annual assembly of the Twin Lakes District Medical Society will be held at Burns' Alhambra Pavilion, Twin Lakes, Rockwell City, June 11, with Dr. Paul W. Van Metre, Rockwell City, presiding. Dr. Olin West, Secretary and General Manager, American Medical Association, Chicago, will speak. Diagnostic clinics in general medicine, eye diseases, general surgery, gynecology and pediatrics will be presented by the following guests: Drs. Robert W. Keeton, professor and head of the department of medicine, University of Illinois College of Medicine, Chicago; Cecil S. O'Brien, professor and head of the department of ophthalmology, State University of Iowa College of Medicine, Iowa City; Claud F. Dixon of the division in surgery, Mayo Foundation, Rochester, Minn.; Ralph A. Reis, associate in obstetrics and gynecology, Northwestern University Medical School, Chicago, and Willis Stanley Gibson, associate professor of pediatrics at Northwestern. The Twin Lakes District Medical Society is composed of the county medical societies of Calhoun, Carroll, Greene, Hamilton, Humboldt, Ida, Sac, Kossuth, Pocahontas, Webster and Wright, affiliated for graduate clinical instruction.

KANSAS

Personal.—Dr. Robert J. Lanning, Junction City, has been appointed county physician and health officer of Geary County, succeeding the late Dr. William S. Yates.——Dr. Franklin E. Schenck, Burlingame, was guest of honor at a banquet, April 16, given by the newly created Osage County Medical Society; he has been practicing in Burlingame for forty years.——A catalogue of paintings presented to the people of Wichita by Dr. and Mrs. Herman de B. Seebold, New Orleans, has recently been issued. The gift was in memory of Mrs. Seebold's father, Mr. William Henry Kinney.

LOUISIANA

State Medical Election.—Dr. Charles M. Horton, Franklin, was chosen president-elect of the Louisiana State Medical Society at its annual meeting in Lake Charles, April 29, and Dr. Hiram W. Kostmayer, New Orleans, was inducted into the presidency. Vice presidents are Drs. Roy Carl Young, Covington; Allen W. Martin, Bogalusa, and Lionel Bienvenu, Opelousas. Dr. Paul T. Talbot, New Orleans, was reelected secretary-treasurer for two years, and Monroe was chosen as the place for the 1937 meeting. The organization of the Louisiana Gynecological and Obstetrical Society took place during this meeting, April 28. Officers are Drs. Peter Graffagnino, president; Edward L. King, vice president, and Walter E. Levy, secretary; all are of New Orleans. Mrs. George D. Feldner, New Orleans, was chosen president-elect of the woman's auxiliary to the state medical society at a session, April 29, and Mrs. James Byron Vaughan, Monroe, was installed as president.

MASSACHUSETTS

State Medical Meeting at Springfield.—The one hundred and fifty-fifth anniversary meeting of the Massachusetts Medical Society will be held at the Hotel Kimball and Municipal Auditorium in Springfield, June 8-10. The speakers will include the following physicians:

Edward A. Schumann, Philadelphia, Antepartum Hemorrhage.
Louis Schwartz, New York, Industrial Dermatoses.
Mont R. Reid, Cincinnati, Problems of Wound Healing.
Alice Hamilton, Boston, Some New and Unfamiliar Industrial Poisons.
Arlie V. Bock, Boston, Use and Abuse of Transfusion in Medical Practice.
Joseph H. Marks, Fall River, Roentgen-Ray Findings in Diaphragmatic Hernia.

A symposium on medical economics will be held Tuesday afternoon, the round table discussion to be opened by Dr. Charles E. Mongan, Somerville, president of the society. Dr. George Blumer, David P. Smith clinical professor of medicine, Yale University School of Medicine, New Haven, will deliver the Shattuck lecture Monday evening; his subject will be "Trichinosis, with Special Reference to Changed Conceptions of the Pathology and Their Bearing on the Symptomatology." Dr. Reginald Fitz, Boston, Wade professor of medicine, Boston University School of Medicine, will present the annual discourse Wednesday afternoon, entitled "From Cow-Path to State Road."

MICHIGAN

Personal.—Dr. Hugh W. Williams, assistant superintendent of the Oakland County Tuberculosis Sanatorium, Pontiac, has been named medical superintendent of the Oakland County Infirmary.——Dr. Guy R. Post, White Cloud, director of the tricounty health unit of Newaygo, Oceana and Lake counties, has been named to a similar position with a newly organized unit in Mecosta and Osceola counties, with headquarters in Big Rapids.——Dr. Frederick H. Cole, Detroit, has been appointed a member of the state board of registration in medicine, succeeding Dr. John E. Handy, Caro, resigned.—— Dr. Nina C. Wilkerson has been appointed health officer of Sturgis, succeeding Dr. Charles G. Miller.——Dr. Neal J. McCann has been named health officer of Ishpeming, succeeding Dr. Joseph P. Bertucci.

Society News.—Dr. Eugene B. Potter, Ann Arbor, discussed "Some Phases of Plastic Surgery and Treatment of the Late Stage of Burns" before the Calhoun County Medical Society, May 5.——Dr. Morris Fishbein, Chicago, editor of THE JOURNAL, addressed the Detroit Teachers' Association in Detroit, May 25, on "Food, Fads and Follies." Previous to the lecture he was guest of honor at a banquet in the clubrooms of the Wayne County Medical Society.——At a meeting of the Kent County Medical Society, May 27, Dr. Robert L. Novy, Detroit, discussed endocarditis.——At the annual meeting of the Wayne County Medical Society, May 18, Dr. Raymond B. Allen, dean, Wayne University School of Medicine, Detroit, discussed "Trends in Medical Education." Dr. Frederick B. Burke was chosen president-elect of the society and Dr. Thomas R. K. Gruber, Eloise, was installed as president.——Dr. Harry L. Huber, Chicago, discussed "Present-Day Problems in Allergy" before the Kalamazoo Academy of Medicine, May 19.

MISSISSIPPI

State Medical Election.—Dr. William L. Little, Wesson, was named president-elect of the Mississippi State Medical Association at its annual meeting in Greenville, May 5-7, and Dr. Harvey F. Garrison Sr., Jackson, was installed as president. Vice presidents are Drs. Angus L. Emerson, Hernando; Guy C. Jarratt, Vicksburg, and Charles C. Hightower, Hattiesburg. The next annual meeting will be held in Meridian, May 11-13, 1937.

MISSOURI

Personal.—Dr. Theodore R. Meyer, Paw Paw, since July 1, 1934, health officer of Van Buren County, Mich., has been appointed to a similar position in St. Louis County.

Society News.—At a meeting of the St. Louis Medical Society, May 19, under the auspices of the St. Louis health division, speakers included Dr. George H. Mathae on "Treatment of Arthritis with Mecholyl Iontophoresis." Dr. Joseph Grindon Sr. discussed "Some Examples of Contact Dermatitis"

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before the society, April 21, and Dr. Norman Tobias, "Summer Skin Diseases in the St. Louis Area." A symposium on the heart was presented by Drs. Drew W. Luten, Oswald P. J. Falk and Julius Jensen.

NEBRASKA

Hospital News.—Bryan Memorial Hospital, Lincoln, held its annual clinic day April 6. Guests were Drs. Clifford G. Grulee, Chicago, who discussed breast feeding; William H. Olmsted, St. Louis, nephritis; Richard L. Sutton, Kansas City, Mo., dermatologic diseases; William C. Menninger, Topeka, Kan., problems of the general practitioner with regard to mental health of his patients, and Nathan A. Womack, St. Louis, the biliary tract.

A Half Century of Service.—Dr. Charles F. Kirkpatrick, Ashland, was guest of honor at a public reception sponsored by the Ashland chamber of commerce, April 8, celebrating his fiftieth anniversary of medical practice in the town. He received a traveling bag as a memento. Dr. Kirkpatrick is 78 years old.——Physicians of Dodge and Saunders counties gave a dinner in honor of Dr. Andrews E. Stuart, Cedar Bluffs, April 1, in Fremont, in celebration of his completion of fifty years of practice in one community. His colleagues gave him a watch as a token of esteem.

NEW JERSEY

Society News.—Dr. Edward Rose, Philadelphia, addressed the Gloucester County Medical Society, April 16, in Woodbury; his subject was "Basal Metabolism and Its Relation to Disease."——At a meeting of the Mercer County Medical Society in Trenton, April 8, Dr. Bernard D. Judovich, Philadelphia, discussed "First Lumbar Neuralgia."——A symposium on the treatment of mental diseases was presented before the Morris County Medical Society in Greystone Park, April 16; speakers were Drs. Laurence M. Collins, Edward I. Kessler, Thomas G. Peacock and Malcolm C. Taylor.——The Bergen County Medical Society held its spring festival at Bergen Pines, the county tuberculosis hospital at Ridgewood, May 13. A program of outdoor sports preceded the scientific meeting, at which speakers included Drs. Oddino Bernardini and William J. Grosfeld of the sanatorium staff, who discussed results of treatment of pulmonary tuberculosis and thoracic surgery, respectively.

NEW YORK

Society News.—The medical societies of Nassau and Westchester counties held their second annual joint dinner meeting and golf tournament, May 26, at the Westchester Country Club, Rye.——Dr. Marion B. Sulzberger, New York, addressed the St. Lawrence County Medical Society, May 21, on "Relationship of Dermatology to General Medicine."

Scarlet Fever from Raw Milk.—Seventy-two cases of scarlet fever with one death, which occurred in Wayne County between February 5 and March 3, have been traced to raw milk, *Health News* reported May 4. All cases but one occurred among patrons of a dairy that supplied two thirds of the village of Red Creek with raw milk. Hemolytic streptococci were found in throat cultures from three of the dairyman's children. One cow had a mastitis, and her milk contained hemolytic streptococci. Pasteurization of the milk supply was begun February 28.

New York City

Newspaper Bars Physicians and Dentists from Advertising.—The New York *American* announces that "the advertising of doctors and dentists, as well as other questionable medical advertising," is henceforth barred from its columns. The publishers believe this action will "maintain and further strengthen the ethical standards of both the medical profession and the advertising business."

Personal.—Dr. Herbert S. Gasser, director of the Rockefeller Institute for Medical Research, New York, has been elected a corresponding member of the Sociedad Argentina de Biologia of Buenos Aires.——Dr. Clarence O. Cheney, who was recently appointed medical director of Bloomingdale Hospital, White Plains, has been appointed professor of clinical psychiatry at Cornell University Medical College and consulting psychiatrist at New York Hospital. Bloomingdale Hospital is associated with Cornell. Dr. Cheney resigned as professor of psychiatry at Columbia University College of Physicians and Surgeons May 1.——Dr. McKeen Cattell has been appointed associate professor of pharmacology in charge of the department at Cornell University Medical College.——Dr. Franz Boas, professor of anthropology, Columbia University, since 1899, has been made professor emeritus.

Award to Dr. Van Slyke.—The Charles Mickle Fellowship of the University of Toronto has been awarded to Donald D. Van Slyke, Ph.D., member of the Rockefeller Institute for Medical Research, in recognition of his methods of blood analysis, gasometric micro-analysis and his work on respiratory and renal reactions, diabetes and nephritis. This fellowship is the annual income from an endowment fund of $25,000 and is awarded to the scientist who has, in the opinion of the council of the university, done most during the preceding ten years to advance sound knowledge of a practical kind in medical art or science. Dr. Van Slyke received his doctor's degree at the University of Michigan in 1907 and became a fellow in physiologic chemistry at the Rockefeller Institute the same year. He was made a member in 1921. He has been president of the Harvey Society and of the Society of Biological Chemists.

Antinoise Ordinance Adopted.—An ordinance prohibiting unnecessary and disturbing noises was adopted by the board of aldermen April 22. The new law prohibits sounding of horns or signal devices on vehicles not in motion and on vehicles in motion except as danger signals. Playing radios or other musical instruments loudly enough to disturb neighbors between 11 p. m. and 7 a. m. is specifically forbidden, as is the keeping of noisy animals and birds. Building or demolition of buildings may not be carried on at night in either business or residential areas except in emergencies, for which the commissioner of buildings must give special permission. Excessive noise on streets where there are hospitals, schools and courts is also banned. Other noises mentioned in the ordinance include the use of vehicles that are unnecessarily noisy because they need repair or are carelessly loaded; noisy unloading or loading of vehicles; blowing of stationary boiler steam whistles except as work or danger signals; operation of any engine without a muffler; bellowing of street hawkers; use of a drum, loud speaker or other noisy device to attract attention to theaters, stores or pedlers, and the use of loud speakers or amplifiers on moving vehicles except by permission of the police department. First offenders are subject to $1 fine or one day in jail; second offenders to a $2 fine or two days' imprisonment and so on, to a maximum of a $10 fine or ten days in jail for five or more offenses. All offenses after the first are counted only if they occur within a year after the first, however.

NORTH CAROLINA

University News.—Dr. Edward R. Baldwin, Saranac Lake, N. Y., addressed the faculty and students of Duke University School of Medicine, Durham, recently, on "The History of Tuberculosis Research in America."

State Medical Election.—Dr. Wingate M. Johnson, Winston-Salem, was chosen president-elect of the Medical Society of North Carolina at the annual meeting in Asheville, May 6. Drs. Charles A. Woodard, Wilson, and John F. Brownsberger, Asheville, were elected vice presidents and Dr. Louis B. McBrayer, Southern Pines, reelected secretary. The next meeting will be in Winston-Salem.

OHIO

Health Departments Merge.—The Hocking and Vinton county health departments have merged, forming a new district health department under the supervision of Dr. Walter B. Lacock, health commissioner of Hocking County. This is the first two county setup in the state, it is reported, although cities and counties have been permitted to combine their health services in the past. Dr. Herbert D. Chamberlain, McArthur, who served as health officer of Vinton County, will retire from this post under terms of the merger.

Personal.—Dr. George P. Tyler, Ripley, celebrated the fiftieth anniversary of his graduation from the Medical College of Ohio, Cincinnati, March 10.——Dr. Dean H. Minnis, Warrensville, has been appointed superintendent at Pleasant View Sanatorium, Amherst, to succeed Dr. Aaron H. Smith, who recently resigned to return to private practice.——John Uri Lloyd, Cincinnati, one time president of the American Pharmaceutical Association, died in Los Angeles, April 9, aged 85.

Flood Emergency Program.—The state department of health reports that flood conditions in the eastern and southern parts of the state caused an emergency in health activities. Dr. Francis E. Mahla, Columbus, assistant director of health, with several members of the state department's staff, went to the flooded district to aid local health commissioners. About 15,000 persons were inoculated against typhoid; 1,251 wells and 689 cisterns were chlorinated; four springs were cleaned and chlorinated. At the time of the report there had been

no case of typhoid directly attributed to flooded wells. A small epidemic resulted from use of a well that was not in the flooded territory but was used because the flood had shut off the regular water supply.

OREGON

Committee to Study Treatment of the Insane. — The state board of control has appointed a committee to study conditions for the treatment of the mentally afflicted, in order that a program of curative and preventive work may be outlined. Dr. Richard B. Dillehunt, dean, University of Oregon Medical School, Portland, is chairman of the committee. The program will be presented at the next session of the legislature.

Drive Against Venereal Disease.—A statewide campaign to control venereal disease in Oregon has been instituted under the direction of the state health officer, Dr. Frederick D. Stricker, according to *Northwest Medicine*. Physicians have been requested to cooperate. The law in Oregon requires the reporting of all venereal diseases to the state health department. In the present campaign, persons suspected of having venereal disease may be isolated at the discretion of the local health officer.

PENNSYLVANIA

State Radiologists' Meeting.—The Pennsylvania Radiological Society was to hold its annual meeting in Williamsport, June 5-6. The following speakers, among others, were to appear on the program:

Dr. Gerald D. Bliss, Altoona, Irradiation Treatment of Acute Infections.
Dr. Edgar C. Baker, Youngstown, Ohio, Clinical Parathyroid Function.
Dr. William J. Corcoran, Scranton, Differential Diagnosis of Conditions About the Hip Joint.
Dr. Forrest L. Schumacher, Pittsburgh, Roentgen Study of the Mastoid.
Dr. Eugene P. Pendergrass, Philadelphia, Roentgen Diagnosis of Gallbladder Disease.
Dr. Peter B. Mulligan, Ashland, Roentgen Study of Genito-Urinary Conditions.

Society News. — Dr. William James Gardner, Cleveland, addressed the New Kensington Academy of Medicine in New Kensington, April 20, on "Treatment of the Late Sequelae of Cerebral Trauma." —— Dr. Harry A. Duncan, Philadelphia, addressed the Cambria County Medical Society, Johnstown, May 14, on "Office Gynecology."——Drs. Earl D. Osborne, Buffalo, and Henry W. F. Woltman, Rochester, Minn., addressed the Lycoming County Medical Society, Williamsport, May 8, on "Treatment of Syphilis" and "Neuritis" respectively. The guest speakers conducted clinics in the morning at Williamsport Hospital.——Drs. John H. Fager Jr. and Edgar S. Everhart addressed the Dauphin County Medical Society, Harrisburg, in April on "Diagnosis and Treatment of Prostatic Conditions" and "Fever Therapy in Syphilis and Gonorrhea" respectively. —— Dr. Emil Novak, Baltimore, addressed the Fayette County Medical Society, Uniontown, May 15, on "Uses and Abuses of Gynecological Organotherapy."

Philadelphia

Society News.—Speakers before the Philadelphia Academy of Surgery, May 4, were Drs. Edward J. Klopp and James M. Surver, on "Cancer of the Colon and Rectum," and Drs. John H. Gibbon Jr. and Edward D. Churchill, "Physiology of Massive Pulmonary Embolism."——Dr. Marshall N. Fulton, Boston, addressed the College of Physicians of Philadelphia, May 6, on "Use of Mercury as a Diuretic" and Drs. Charles C. Wolferth and Alexander Margolies, "Mechanism and Clinical Interpretation of Heart Sounds." —— At a meeting of the Obstetrical Society of Philadelphia, May 7, speakers were Drs. Spencer Leon Israel, on "Ovarian Rupture Causing Intraperitoneal Hemorrhage"; George M. Laws, "Spina Bifida Occulta, with Special Reference to Uterine Prolapse," and George A. Ulrich, "Use of Internal Podalic Version in Obstetrics." —— Among speakers before the Philadelphia Roentgen Ray Society, May 7, were Drs. John T. Farrell Jr., on "Primary and Metastatic Pulmonary Malignancy"; Russel F. Miller, "A Roentgenologic Study of Sympathicoblastoma" and Bernard P. Widmann, "A Radiologic Conception of the Reticulo-Endothelial System."——Dr. Disraeli W. Kobak, Chicago, addressed the Philadelphia County Medical Society, May 27, on "Influence of Short Wave Radiation on Constituents of the Blood," and Drs. Eugene M. Landis and Lewis H. Hitzrot, on "Evaluation of Suction Pressure in Peripheral Vascular Disease."——Dr. Temple Fay discussed the mechanism of headache and Drs. Francis C. Grant and Robert A. Groff, tumors of the tuberculum sellae at the meeting of the Philadelphia Neurological Society, May 22.——At a meeting of the Metabolic Association of Philadelphia, May 22, Dr. Irvine H. Page, New York, discussed arteriosclerosis and hypertension, and Dr. Virgil H. Moon, pathologic and general considerations of arteriosclerosis.

SOUTH CAROLINA

New Health Officers. — Several new health officers for counties and districts have recently been appointed, according to newspaper reports. They include the following:

Dr. Gordon R. Westrope, Columbia, to Cherokee County.
Dr. John Y. O'Daniel, Erwin, Tenn., to Marlboro County.
Dr. George Fletcher Reeves, Goldsboro, N. C., to Colleton County.
Dr. Edward P. White, Gaffney, to Richland County.
Dr. William Burns Jones, Columbia, to Chester and Union counties.
Dr. Thomas B. Phinizy, Augusta, Ga., to Bamberg, Allendale and Barnwell counties.

TEXAS

Personal.—Dr. Bernhard E. Knolle, Industry, was recently the guest of honor at a barbecue at the Brenham Country Club celebrating his fiftieth anniversary in the practice of medicine. Dr. Knolle's sons, Drs. Waldo A. and Roger E. Knolle, were hosts and Dr. Richard E. Nicholson was toastmaster.—— Dr. Edythe P. Hershey, director of health in the Dallas public schools, has been appointed director of the child health and maternity divisions of the state health department, it is reported.——Dr. Robert J. Jaehne, Austin, was recently named health officer of Travis County, it is reported.——Dr. Charles S. Carter, Bells, has been appointed to the board of medical examiners to succeed the late Dr. Marquis E. Daniel, Honey Grove.

UTAH

Society News.—The Salt Lake County Medical Society has recently created a speakers' bureau to supply authoritative speakers in response to requests from lay groups and to give radio talks when the opportunity may arise. Dr. Edward S. Pomeroy is chairman of the bureau.——Drs. Leland R. Cowan and Ozra J. LaBarge, Salt Lake City, addressed the Central Utah Medical Society at Mount Pleasant, April 1.——Dr. Lewis Weston Oaks, Provo, addressed the Utah County Medical Society in April on allergy.——The council of the Utah State Medical Association visited the Cache Valley Medical Society, recently. Dr. William R. Tyndale, Salt Lake City, president of the state association, made an address on amebiasis; Dr. Louis E. Viko, Salt Lake City, president-elect, spoke on medical economics, and others discussed organization problems.

VIRGINIA

Pediatric Society Meeting.—The annual clinic of the Virginia Pediatric Society was held at the Medical College of Virginia, Richmond, May 29. The program included a symposium on disorders of the respiratory tract, a clinical-pathologic discussion of pediatric cases and an address by Dr. Albert Compton Broders, Richmond, on "Malignancy in Children."

New Health Officers.—Dr. Mack I. Shanholtz, Beckley, W. Va., has been appointed director of the health district comprising Bristol and Washington counties, with headquarters at Bristol. Dr. Charles L. Savage, Charlottesville, has been appointed director of the Buchanan-Russell-Tazewell Health District, with headquarters at Richlands. Dr. John B. H. Bonner, Beaumont, was appointed director of the Sussex County Health District in April, with headquarters at Stony Creek.

GENERAL

Conference on Teaching of Psychiatry.—The fourth conference on psychiatric education called by the division of psychiatric education of the National Committee for Mental Hygiene was held at Phipps Clinic, Baltimore, under the chairmanship of Dr. Adolf Meyer, director of the clinic, April 8-10. Thirty-eight medical schools were represented by 110 teachers of psychiatry. Discussions centered around types of teaching organization, especially the content of undergraduate courses; opportunities for teaching in state hospitals, consultation work, outpatient work, child guidance and social service and other fields.

Dr. Wheeler Awarded Dana Medal.—Dr. John M. Wheeler, professor of ophthalmology, Columbia University College of Physicians and Surgeons and director of the Institute of Ophthalmology at the Columbia-Presbyterian Medical Center, New York, was presented with the Leslie Dana gold medal for "outstanding achievements in the prevention of blindness and the conservation of vision" at a dinner in his honor in St. Louis, May 9. Dr. Wheeler was selected for the award by the National Society for the Prevention of Blindness in cooperation with the St. Louis Society for the Blind, which offers the prize

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annually. Dr. Wheeler graduated from the University of Vermont School of Medicine in 1905. He has held his positions with Columbia and Presbyterian since 1928 and in 1934 was president of the American Academy of Ophthalmology and Oto-Laryngology.

Association for Study of Goiter.—The annual meeting of the American Association for the Study of Goiter will be held at the Drake Hotel, Chicago, June 8-10. Speakers will include the following physicians:

James B. Collip, Montreal, Canada.
Jacob Lerman and William T. Salter, Boston, Rôle of Natural and Artificial Thyroid Proteins.
John de J. Pemberton, Rochester, Hyperthyroid Reactions.
Frederick A. Coller and Walter G. Maddock, Ann Arbor, Mich., Liver Function in Relation to Hyperthyroidism.
James H. Hutton, Chicago, Response of Exophthalmic Goiter or Graves' Disease to Irradiation of the Pituitary and Adrenals.
Arthur E. Hertzler, Halstead, Kan., End Results of Total Ectomies in Interstitial Goiters, Cardiotoxic States and Spontaneous Myxedema.

Tuesday morning clinics will be held at Augustana, Cook County and Presbyterian hospitals. The annual dinner will be addressed by Dr. Julius R. Yung, Terre Haute, Ind., president of the association, and Gordon Jennings Laing, LL.D., dean of the division of humanities, University of Chicago.

Medical Bills in Congress.—*Changes in Status:* H. R. 12374 has been reported to the House, proposing to authorize the President to provide employment for unemployed citizens of the United States to discover and develop the mineral resources, and to provide medical care and hospitalization for such persons. H. R. 12793 has been reported to the House, proposing, among other things, to amend the Harrison Narcotic Act so as to provide for the registration of persons using narcotics in a laboratory for the purposes of research, instruction or analysis and to impose a special tax on such registrants of $1 per annum. *Bills Introduced:* H. R. 12839, introduced (by request) by Representative Bacon, New York, proposes to extend the status of veterans of the World War to persons enlisted and serving in war zones on United States Shipping Board vessels during the World War. H. R. 12890, introduced by Representative Colmer, Mississippi, proposes to extend the benefits for veterans of the Spanish-American War, including the Philippine Insurrection and the China Relief Expedition, to contract veterinarians.

Meeting of Association for Advancement of Science.—The section on medical sciences (N) of the American Association for the Advancement of Science will meet during the annual session of the parent organization, June 16-18, in Rochester, N. Y. The remainder of the meeting of the national society will be held in Ithaca. The main feature of the program of the section will be a memorial session in honor of Dr. Theobald Smith. This session, a joint one with the Central New York Branch of the Society of American Bacteriologists, will be opened with an address by Simon Henry Gage of Cornell University, entitled "Theobald Smith: Investigator and Man." A joint meeting will also be held with the Western New York Branch of the Society of Experimental Biology and Medicine. Speakers to appear on the two day program of the section will include:

Rudolph J. Anderson, Ph.D., New Haven, Chemical Studies on Wax Fractions of the Tubercle Bacillus.
Dr. Augustus B. Wadsworth, Albany, Practical Problems in the Serum Therapy of Bacterial Infections.
Dr. George P. Berry and Helen M. Dedrick, A.B., Rochester, Transformation of the Virus of Rabbit Fibroma (Shope) into That of Infectious Myxomatosis (Sanarelli).
Dr. I. Newton Kugelmass, New York, Modifying Milk for Infants' Digestion.

Society News.—Dr. Mabel M. Akin, Portland, Ore., was chosen president-elect of the Medical Women's National Association at the annual meeting in Kansas City, May 11, and Dr. Catharine Macfarlane, Philadelphia, was installed as president. Other officers elected were Drs. Olga F. Stastny, Omaha, Marie E. Esmond, Kansas City, and Lillian C. Irwin, Seattle, vice presidents, and Dr. Julia Faith Skinner Fetterman, Philadelphia, secretary.——At the fifth annual meeting of the Harvey Cushing Society in Rochester, Minn., May 15-16, Dr. Kenneth G. McKenzie, Toronto, was chosen president; Dr. Richard Meagher, New York, vice president, and Dr. Louise C. Eisenhardt, New Haven, secretary. Dr. Ernest Sachs, St. Louis, was chosen an honorary member. The next annual meeting will be held in Philadelphia.——Dr. Thomas R. Boggs, Baltimore, was elected president of the Association of American Physicians at its annual meeting in Atlantic City, May 6; Dr. George R. Minot, Boston, was made vice president and Dr. Hugh J. Morgan, Nashville, Tenn., secretary.

Fraudulent Instrument Repair Man.—Numerous complaints have been received from physicians in North Carolina, Virginia and Tennessee describing an impostor who has been soliciting work in repairing and replating surgical instruments. In North Carolina the name of the man was reported to be Postly, representing "Postly and Company," supposedly of Knoxville, Tenn. From a number of physicians he obtained instruments to be repaired, saying that his firm had a branch in Atlanta managed by his brother. The victims paid him in advance 25 cents per instrument. When the instruments were not returned within a reasonable length of time, they wrote to Atlanta and to Knoxville. Letters to Atlanta were returned, but those sent to Knoxville did not come back to the writers. Inquiries of the Knoxville postoffice revealed that Postly had mail addressed to 118 Market Street, a nonexistent street number, but received it through general delivery. The North Carolina physicians described the man as about 50 years old, of slight build and average height, not well dressed. Letters from Virginia and Tennessee tell a similar story except that the name used was Hinton and the firm "Hinton and Company," alleged to be in Louisville, Ky. They describe the man as about 50 years old, weighing about 150 pounds, 5 feet 10 inches tall, wearing glasses. One report said that his lenses are both minus 4, rimless, octagonal; that he has gray eyes and sandy hair, thin on top, and that he talks well and is interested in Egyptology. The chief of police in Louisville advised that there is no Hinton and Company at 518 South Fourth Street and no such name in the city directory.

CANADA

Public Health Organizations Hold Joint Meeting.—The State and Provincial Health Authorities of North America, the Canadian Public Health Association, the Western Branch of the American Public Health Association, the Canadian Tuberculosis Association and the British Columbia Public Health Association will meet in Vancouver, B. C., June 22-27. The various groups will hold separate meetings for the most part, but there will be a general session Wednesday morning, June 24, at which the presidents of the various organizations will give their official addresses. This session will be followed by a luncheon at which speakers will be Drs. Thomas Parran, surgeon general of the U. S. Public Health Service, Washington, D. C., and John J. Heagerty, chief executive assistant, department of pensions and national health, Ottawa. The same evening there will be a public meeting, at which speakers will be the Hon. D. Pattullo, premier of British Columbia; George M. Weir, provincial secretary and minister of health of British Columbia, and Dr. Hugh A. Farris, St. John, N. B. Drs. Stanley H. Osborn, Hartford, Conn., and John G. Fitzgerald, Toronto, will speak at a joint luncheon Thursday, June 25.

FOREIGN

Summer School in Psychology.—The fifth annual summer school in psychology at the University of Vienna Psychological Institute for English-speaking students will be conducted July 13-August 8. Information may be obtained from Henry Beaumont, Ph.D., department of psychology, University of Kentucky, Lexington, or directly from Egon Brunswik, at the psychologic institute, Liebiggasse 5, Vienna 1, Austria.

New Medical Institute in Australia.—The Australian government and the University of Adelaide are collaborating in the establishment of an Institute of Medical Science, it is reported. The government is contributing £15,000 to match a similar amount privately subscribed. Dr. Edward Weston Hurst, who is a member of the Lister Institute and reader in pathology at the University of London, has been appointed by the Australian government as director of the institute.

Personal.—Prof. Herbert H. Woollard, since 1929 professor of anatomy at St. Bartholomew's Hospital Medical College, has been appointed to the university chair of anatomy tenable at University College.——Sir Patrick Laidlaw has been appointed by the British Medical Research Council to be deputy director of the National Institute for Medical Research and head of the department of pathology and bacteriology.——The Cross of Officer of the Legion of Honor has been conferred on Sir Henry Wellcome, London, by the president of the French Republic.

CORRECTION

Outbreak of Epidemic Jaundice.—The article by Willett, Sigoloff and Pfau entitled "An Institutional Outbreak of Epidemic Jaundice," in THE JOURNAL, May 9, was indexed on the inside cover page of that issue as "jaundice, epidemic, traced to holy water fonts." The index reference is misleading in that the relationship of the Leptospira found in the water to the dissemination of the outbreak could not be ascertained.

Foreign Letters

LONDON

(From Our Regular Correspondent)

April 18, 1936.

Some Schools Closed for Want of Children

The continual fall in the English birth rate has become a commonplace, but it is realized only by statisticians that it has for some time been below the level necessary for the reproduction of the present population, so that a decline, slow at first but more rapid after twenty years, is a necessary result of the present birth rate. A profound change has already taken place in the age constitution of the English population. While the birth rate has been falling, improved sanitation has prolonged life, with the result that the proportion of old persons in the population has increased and the proportion of children diminished. In 1901, 11.4 per cent of the population of England and Wales were children under 5 years of age and 10.6 per cent were persons over 55. By 1911 the percentage of children had fallen to 10.7 and of those over 55 years of age had increased to 11.6. The estimate for 1928 was 8 per cent of children under 5 years and 15.8 per cent of persons over 55 years. It is estimated that, by 1941, 7.5 per cent of the population will be children and more than 19 per cent persons over 55. The fall in the number of children is revealed by startling figures just published by the London County Council, which has had to close some of its schools. In the year 1914-1915 there were 727,052 children in these schools. In the present year there are only 510,000 and it is estimated that in 1936-1937 the number will fall to 475,000, a reduction of nearly 30 per cent in twenty-two years.

The fall in the birth rate began about sixty years ago and has since steadily progressed. In the decade 1871-1880 the average annual rate was 35.4 per thousand of population, and in the successive decades 32.4, 29.9, 27.2 and 21.8. After that the rates for individual years are available. Omitting the years in which considerable disturbance was produced by the war, from 1922 to 1927 the rates were 20.4, 19.7, 18.8, 18.3, 17.8 and 16.6. Thus in 1926 the rate was 17.8, almost exactly half what it was fifty years ago. In 1933 the birth rate reached its lowest point, 14.4, and was so near the death rate that the net increase of population was only 2.1 per thousand. From the beginning of the nineteenth century until the great war the population of England increased by 12.5 per thousand annually, a rate greater than that of any other country in Europe. From 1914 to 1924 the annual increase was only 4.7 and from 1924 to 1934 it was 4.4. The fall in the first period was due to high war mortality and decrease of fertility; in the second period, to further decrease of fertility.

But all these figures do not reveal the seriousness of the position. A slight increase of population still exists. What few people realize is that, while a population may increase for some time, its fertility may already be reduced to a level which means, if unchanged, ultimate extinction. This has occurred in England. To understand the position, recourse must be had to a new index of population growth, introduced by Kuczynski and termed "the net reproduction rate." This is defined as the average number of females that will be born to every new-born girl. It can easily be calculated on the assumption that the fertility and death rates of a particular year continue and so continue to be applicable to the life of the girls born in that year. If the average number of girls born to every new-born girl is one, each will be replaced by another in the next generation, and the population will remain stationary. If the average number is less than one, the population will decrease. Now the net reproduction rate of England and Wales for 1933 is 0.734. If the present rates are maintained, there will be in the next generation only about three fourths of the present number of new-born girls, and this reduction will be repeated in the succeeding generations.

An exhaustive study of the effect of the present trends in fertility and mortality on the future population of England and Wales, by Dr. Enid Charles, has been published by the London and Cambridge Economic Service. She points out that, if the present rates continue, the extinction of the population is only a matter of time. To forecast what will actually occur, she considers three hypotheses: (1) that the fertility and mortality rates continue as in 1933; (2) that the recent fall in these rates will continue; (3) that mortality continues to fall and that fertility remains constant at the 1931 level. According to the first hypothesis a decline in population will begin in 1943; according to the second, in 1939; according to the third, between 1960 and 1965. But there will be no spectacular change before twenty years has elapsed. Thereafter the fall will be rapid on any assumption that seems plausible in the light of experience. According to the first hypothesis the population will be halved a century hence; according to the second, it will be reduced to one tenth; according to the third, to about four fifths.

The Campaign Against Noise

The campaign against noise goes on. The claim is now made that London possesses the only hotel in Europe which is noise proof and air conditioned. Double windows, set in continuous heavy steel frames, exclude all noise. By a ventilating system fresh air, cleaned and maintained at an equable temperature, enters and is withdrawn through vents at floor level. In regard to these improvements Lord Horder, chairman of the Anti-Noise League, said that noise is going "to do us in" unless we do something about it. Modern life was full of stresses and strains, and it was essential to do everything possible to absorb unnecessary and provocative noise. The modern machine that we had devised would overcome us unless we controlled it.

The noise of aircraft is also receiving attention. The Anti-Noise League has been in communication with the Air Ministry and the Aeronautical Research Committee with regard to complaints received by it, mostly in connection with civil flying and particularly training and taxi aircraft. In a letter to the Secretary of State for Air, the league stated that widespread suffering was caused by low flying. The work in hospitals has been interfered with and annoyance has been caused during a funeral service. To the Aeronautical Research Committee it was suggested that airplanes on short flights should be required to have silencers affixed to their engines. The Air Ministry is taking cooperative action with the operating companies with view to reducing the evil.

New X-Ray Apparatus

A new x-ray apparatus which marks an important advance in technic has been installed at two London hospitals—St. George's and Brompton. By it roentgenograms of remarkably clear definition may be taken with an exposure of one-thirtieth second. Ordinary stationary apparatus requires exposures of at least one-tenth second and portable apparatus one of at least two seconds. The new instrument is portable. The inventor is Dr. A. Bouwers of Eindhoven, Holland. It has the advantage that it may be operated from the electric mains.

The Exploitation of the Deaf

The National Institute for the Deaf has issued a booklet on the exploitation of the deaf. The object is not to discourage the use of mechanical or electrical aids to hearing or to limit their sale by reputable firms but to draw attention to the extravagant and unjustifiable claims made for extensively advertised appliances. Inquirers in ever increasing numbers

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report to the institute unscrupulous misrepresentation. The institute advises the deaf to consult an ear specialist, either privately or at a hospital, as to whether an aid is required. They are warned against advertisements which promise perfect hearing irrespective of the cause, degree of deafness or age of the sufferer. They are advised to sign no contract without having read it carefully and to avoid firms that do not allow for an adequate trial of any aid.

PARIS

(From Our Regular Correspondent)

April 28, 1936.

Tubercle Bacilli in Gastric Contents in Children

At the January 24 meeting of the Société médical des hôpitaux, Debré, Saenz, Broca and Costil emphasized that although it is not difficult to find tubercle bacilli in the stomach contents, the method is not so frequently employed as it deserves to be. The two methods recommended in the search for tubercle bacilli are the culture methods and animal inoculation. The sources of error are virtually negligible, as their experience has shown. In twenty-one cases of frank pulmonary lesions, as well as in tuberculous bronchopneumonia and miliary tuberculosis, the tubercle bacilli were found by culture or animal inoculation. In nontuberculous pulmonary lesions occurring in children, with positive skin reactions, the examination of the gastric contents for tubercle bacilli was negative in eleven cases. In ten cases of incipient pulmonary tuberculosis, there were six positive results. These six positive cases are of special interest because the physical examination was negative and in three of these six there was an absence of cough.

In twelve cases of erythema nodosum there were nine positive results; i. e., tubercle bacilli were found in the gastric contents. In seven of the nine positive cases the radiographic examination revealed an initial pulmonary focus. Debré, Saenz, Broca and Costil stated that the search for tubercle bacilli in the gastric contents is a method of diagnosis which deserves to be used in children as well as in adults who do not have any expectoration. The method is especially indicated in erythema nodosum, tuberculous meningitis, miliary tuberculosis and incipient tuberculosis. It is useful in cases in which the exposure to a tuberculous infection dates back only three or four months; i. e. before a tuberculin reaction can be expected to be positive.

A second paper by Lesné, Saenz, Dreyfus-Sée, Launay and Salambiez gave the results of the search by culture or animal inoculation for tubercle bacilli in the gastric contents in thirty-five children. In two thirds of the cases the tubercle bacilli were found in the gastric contents. Children below the age of 3 years seldom cough or expectorate; hence finding the bacilli by culture or inoculation in the gastric contents is of great diagnostic importance. All children below the age of 3 who show positive skin reactions should be isolated, because frequently toys or spoons become contaminated by tubercle bacilli in the saliva or nasopharyngeal secretions, as has been shown by Lesné and Langle in 70 per cent of tuberculous infants. Every institution that cares for children ought to separate those less than 3 years of age having positive from those having negative skin reactions.

A single examination of the gastric contents, either by culture or by animal inoculation, has sufficed to yield a positive result in every case of primary infection. Stained specimens of the gastric contents have been negative, although such children will occasionally show a few bacilli on staining of the sputum.

The recent advances in the clinical and radiologic diagnosis of such cases of primary infection in children makes it obligatory to separate these children in families, schools and sanatoriums from those who are in a receptive condition. Children with primary infection should not be exposed to the dangers of superinfection which a stay in a sanatorium, where there are patients with cavities and whose expectoration contains many bacilli, would involve. Hence these children with primary infection constitute a special group who on the one hand must be prevented from infecting healthy children and, on the other, protected against additional infection by the more severely affected. These primary cases should be excluded from institutions receiving children with negative skin reaction, who are particularly susceptible to infection. Children with a positive reaction who do present either radiologic or clinical evidence and whose gastric secretions do not reveal the presence of bacilli can as in the past be considered noncontagious. They cannot be excluded from institutions receiving children with negative skin reactions.

In the discussion, Armand-Delille stated that his observations confirmed those cited by the authors of both papers.

Rist emphasized the value of examination of the gastric contents, in adults, for tubercle bacilli. One can readily follow the course of a case of pulmonary tuberculosis and thus determine its cure, by repeated examination of the gastric contents.

At the January 31 meeting, Armand-Delille read a paper on the same subject. His results were as follows: In fifty-two cases of the ulcerative type of pulmonary tuberculosis, fifty-two (100 per cent) positive results. In fifty cases of the infiltrating type of pulmonary tuberculosis, fifty-eight, or 76 per cent, positive results. In seventeen cases of miliary pulmonary tuberculosis, nine, or 53 per cent, positive results. In primary infection of infants, twenty-two, or 52 per cent, positive results. On the other hand, of 185 children sent for diagnosis who gave normal radiographic results and of whom 150 had positive skin reactions, the gastric contents were positive in only one. Armand-Delille praised the work of Saenz and Costil of the Pasteur Institute in developing the technic of the culture method for finding tubercle bacilli.

The search for tubercle bacilli in the gastric contents of children has been the subject of papers read in recent months before various societies in Paris. The latest of these was by Armand-Delille and Kerambrum at the March 10 meeting of the Académie de médecine. They have employed the Meunier method since 1927, in conjunction with homogenization as suggested by Bezançon and Philibert as a diagnostic resource in children and in certain adults, especially in young women when there is little expectoration. In 1,300 children there were 96.4 per cent positive results in pulmonary tuberculosis with cavity formation and 13.5 per cent positive results in serofibrinous pleurisy without demonstrable involvement of the lung itself. In cases suggestive of pulmonary tuberculosis but in which the stained sputum specimens were negative, there were seventeen positive and fourteen negative results on inoculating guinea-pigs with the gastric contents. Cultures on the Petroff medium have not given satisfactory results. With the Loewenstein or Petragnani mediums in eleven cases, the guinea-pig and culture were both positive in two of these eleven cases, whereas in four of the eleven the culture was positive but the guinea-pig inoculation was negative. In five of the eleven, the guinea-pig test was positive and the culture negative. In 586 cases in which expectoration and physical signs were positive but roentgen examination was negative, the examination of the gastric contents was positive in only three.

Bone Graft to Increase Diameter of Contracted Pelvis

A report of eight cases in which a contracted pelvis was enlarged by bone grafts following symphysiotomy, with one normal delivery already recorded, was made at the March 17 meeting of the Académie de médecine by Yves Delagénière of Mans. In October 1933 six cases were reported at the French Surgical Congress, in which a definite enlargement of

the pelvis followed the insertion of osteoperiosteal grafts placed in the interspace between the pubic rami, a few weeks after symphysiotomy had been performed. Since this first communication, two additional operations have been performed. In his present paper he reports one of the more recent successful cases. A primipara, aged 19 years, was admitted to the maternity, Oct. 19, 1934. The bag of waters had ruptured and labor had begun four days previously. Delivery with the aid of forceps had been attempted but the head was arrested above the pelvic inlet. As the anteroposterior diameter was only 8.5 cm., Delagénière decided to perform a symphysiotomy. A separation of about 3.5 cm. having been attained, forceps were applied and a living child weighing 2,500 Gm. (about 5 pounds) was delivered. A phlebitis as a puerperal complication necessitated sending the patient home for two months before attempting the insertion of osteoperiosteal grafts in the space between the two pubic bones. Two grafts each 7 cm. in length and 1.5 cm. in width were taken from the right tibia and inserted transversely in a 4 cm. wide interval corresponding to the former pubic symphysis. The patient returned home and the plaster cast was removed six weeks after the operation. She returned in December 1935 stating that she was eight months pregnant. The anteroposterior diameter measured 10.5 cm. Early in February 1936 a normal delivery lasting only three hours occurred. The child weighed 6½ pounds (about 3 Kg.). Examination of the eight patients operated by Delagénière revealed a separation of 3.5 cm. at the pubic symphysis without any complaints on walking or standing. As to the time at which the bone grafting should be performed, this can be done from ten to fifteen days after the symphysiotomy provided the temperature during the puerperium has not risen above 38 C. (100 F.); otherwise it is advisable to wait for two months. Following the bone grafting to enlarge the interpubic space, the patient should be kept in bed for six or eight weeks without any cast unless the interspace is more than 3.5 cm., when a light plaster girdle is advisable.

BERLIN

(From Our Regular Correspondent)

April 15, 1936.

The Health of Applicants for Marriage Loans

The new policy of marriage loans has given rise to many medical questions, which have now in part been answered. The first comprehensive statistical report on the health of applicants for marriage aid has recently been published by the hereditary and racial hygiene section of the national bureau of health. This survey covers the year from July 1, 1934, to June 30, 1935. During this period there were received at the national bureau of health, where all such material is centralized, a total of 333,776 applications. Of this number, 97.28 per cent were considered acceptable; 2.72 per cent of the applications, however, were rejected on medical grounds. Noteworthy is the classification of the grounds for rejection under three main heads. The figures are as follows: Of the 27.2 per thousand rejected, 18.3, that is, two thirds of the total number, were rejected as afflicted with hereditary or acquired disease; a further 5.9, that is, about two ninths of the total number of rejections, were based on hereditary taint although the rejected were healthy phenotypes, and a final 2.9, forming one ninth of the total, were rejected because of the unfitness of the prospective marriage partner. Rejected applicants in the last named group receive a certification of fitness when and if they select another and healthier marriage partner. These figures are generally constant for the various political divisions of Germany as well as for the seasons of the year. There were in all 4,255 male and 4,810 female applicants rejected during the period covered by the report, a ratio of 100 males to each 113 females.

More than half (51.38 per cent) of all the rejections were based on congenital feeblemindedness. Other hereditary diseases coming within the scope of the legislation, with their percental proportions to the total number of rejections, were schizophrenia 5.95 per cent, epilepsy 4.29, inherited bodily deformity 3.62, hereditary blindness and other visual disturbances 1.16, manic depressive insanity 1.06. Further may be mentioned alcoholism and other addictions 1.39 per cent, psychopathic disorders 4.5, diabetes 1.11, diseases of the heart and blood vessels 2.37, nervous disorders 1.54, tuberculosis 5.49, suggestive type tuberculosis 1.67, syphilis 5.33, gonorrhea 1.58, sterility or incapacity for bearing children 2.64 and, finally, other conditions endangering a fruitful marriage 1.25 per cent. All others listed under particular specified diseases amount to less than 1 per cent. Criminality, for example, accounts for 0.62 per cent.

In 81.9 per cent of cases involving feeblemindedness the applicants presented the congenital defect, while in 18.1 per cent of the cases the applicants were healthy phenotypes with defective heredity. Likewise in cases involving hereditary bodily deformities and psychopathic states the first category, that of the diseased phenotypes, preponderates; among the cases involving deformity the ratio is 87.7 per cent diseased phenotypes: 12.3 per cent healthy phenotypes; among cases involving psychopathic states the corresponding ratio is 75.3 per cent: 24.7 per cent. On the other hand, certain hereditary disorders show a preponderance of healthy phenotypes among the rejected; thus, schizophrenia 93.8 per cent healthy phenotypes, hereditary epilepsy 84 per cent healthy phenotypes, alcoholism 76.4 per cent healthy phenotypes to 23.6 alcohol addicts.

There is still a final subheading called "Uncertain Disease Conditions and Other Grounds for Rejection." Of the 134 persons included in the group, 12.68 per cent presented "unfavorable coincidences of minor defects" and 44.78 per cent were rejected on nonmedical grounds (racial extraction and political untrustworthiness, for example).

Persons rejected because of the unsuitability of the prospective marriage partner are considered as a separate class. There were 1,025 such rejections, representing 11.3 per cent of the total number.

This survey is of unique interest as the first of its kind. Whether or not these figures will remain constant when compared with data for longer periods of time cannot be foretold.

The number of marriage loans granted from August 1933 to the end of 1935 was 523,000 according to the most recent calculations of the national bureau of statistics (THE JOURNAL, Dec. 14, 1935, p. 1999). The law stipulates that for each child born a reduction of the principal of the debt shall be made; such partial remission of the obligation was made in 298,631 cases during the same period. In the year 1935 alone 156,788 marriage loans were repaid, the number of discounts for living births amounting to 155,060.

Voluntary Castration

A decree has just been issued by the minister of the interior and the minister of justice which seeks to regulate the question of voluntary castration. It applies to men who are guilty of crimes and misdemeanors imputable to degenerate sexual impulses. Such cases might involve homosexuality, for example, as well as such offenses as sodomy, indecent liberties with children, rape and exhibitionism. Persons may be castrated on their own consent when judicial opinion and forensic medical opinion concur in the advisability of this measure. The purpose of castration is to free the offender from the degenerate sexual impulse which it is feared would otherwise lead to the perpetration of further acts of a similar nature. Whether in a given case the official medical examiner will discuss with

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the accused the question of voluntary castration or whether such discussion takes place only if the accused himself has expressed a willingness to be castrated will be determined according to the merits of the individual case. Since the organism is seriously affected both physically and psychically by castration, a careful examination must precede any such intervention. A written declaration must be submitted by the person involved, which may subsequently be withdrawn by him at any time. It is explicitly pointed out that the voluntary nature of the request must not be impaired by any suggestion of compulsion either direct or indirect. It is further expressly forbidden that a suspension of sentence be made in any way contingent on the offender's willingness to undergo castration. On the other hand, there is nothing in the law to prevent the granting of a suspension of sentence in these cases if the court has reason to believe that the future law-abiding conduct of the offender is guaranteed.

NETHERLANDS

(From Our Regular Correspondent)

April 24, 1936.

The Development of Mental Hygiene

A report by Dr. E. F. Meyers on "The Development of Mental Hygiene" has been submitted to the International Bureau of Public Hygiene. Mental hygiene should remain the province of the physician. This report contains some valuable data. Jan. 1, 1935, the total population of the Netherlands was around 8,392,000, among whom were 23,700 insane persons undergoing asylum treatment either wholly or partly at governmental expense. Expenditures for this purpose amount to some 18,000,000 florins per annum. The number of persons with mental disorders committed for treatment has shown a steady increase independent of the growth of the population as a whole. This is demonstrated by the following table from the official report of inspection:

Year	Population of the Netherlands	Population of Asylums and Psychiatric Institutes	Percental Proportion per 10,000 Inhabitants
1919	6,831,231	15,894	23.3
1925	7,416,418	19,065	25.7
1930	7,920,388	22,178	28.0

There are now forty-three institutions for the insane within the kingdom, of which eighteen are under nonsectarian auspices while the remainder are largely reserved for Protestants or Roman Catholics. One establishment is operated exclusively for Jewish patients. The most important organization, especially with regard to the "after-care" of nervous mental patients, is the central society, which has twenty-two branch dispensaries distributed throughout the kingdom. At the head of each of these stations is a psychiatrist assisted by a nurse, who handles the social case work. With regard to feebleminded children, it is admitted that 2 per cent of the kingdom's school children must be placed in institutions which are termed "schools of special instruction." There are thirty-eight such schools located in as many communes. Of this number twenty-seven are designated as nonsectarian, while eleven have sectarian affiliations. The population of these thirty-eight schools is at present 9,024. In addition there are thirteen boarding-schools furnishing special instruction for feebleminded children. Five of these schools are conducted by psychiatric institutes. There are two pedologic institutes in the kingdom, one connected with the University of Amsterdam (Protestant) and the other with the University of Nimeguen (Roman Catholic).

Prophylactic measures against mental disorders may resolve themselves into such activities as the campaigns against alcoholism and syphilis, but most important of all are those systematic eugenic measures dictated by our knowledge of hereditable mental disease. Among all the patients treated, the disorder could be traced to alcoholism in 13 per cent of the men and 3 per cent of the women, and to syphilis in 13 per cent of the men and 7 per cent of the women.

Arsine Intoxication

Mr. Hult and Dr. A. Vos reported in the *Geneeskundig Tijdschrift der Rijksverzekeringsbank* all the cases of arsine poisoning that have occurred in the zinc oxide factories of the Netherlands. They cite two groups of cases. In the first, six workmen were taken ill, one fatally, while on duty in a plant where zinc dust stored in special vats was converted into zinc sulfate. This process entailed the generation of hydrogen and of arsenic and the gases emanating from the vats, instead of being carried off by the wooden flues intended for that purpose, leaked out into the premises. In the second instance the workroom had been ordered kept open at all times but through the carelessness of one of the men a leakage took place which permitted the noxious gas to invade the premises. The hospital physician noted that the patients complained of itching on the hands and fingers. Diagnosis can be quickly established by the patients' reddish urine, which contains hemoglobin and methemoglobin. The arsine is transformed to colloidal arsenic by the oxidized hemoglobin. The liver produces a large quantity of obstructive bile, which gives rise to icterus. The cyanogen and jaundice impart a peculiar hue to the epidermis, so that the patient resembles an Indian. Physicians are compelled by law to report all cases of arsine poisoning to some competent authority.

ITALY

(From Our Regular Correspondent)

April 7, 1936.

Reunion of Gastro-Enterologists

The first reunion of the Società italiana di gastro-enterologia took place recently at the University of Rome, under the chairmanship of Prof. Cesare Frugoni of Rome. Professor Baglioni, director of the Scuola di Fisiologia of Rome, spoke on the metabolism of alcohol. Microdeterminations of alcoholemia have proved the presence of a small but determinable quantity of alcohol in the blood of sober persons during fasting (about 0.005 Gm. of alcohol per thousand cubic centimeters of blood). This fact indicates that alcohol is not a heterogenic substance to the human body. The results of the studies of the curve of alcoholemia proved also that there is more alcohol in the blood following drinking on an empty stomach than following it together or after a meal. Serianni investigated the variations of alcoholemia in several experimental conditions. He found also that, when the functions of the liver are impaired, the curve of alcoholemia which follows drinking during or after a meal is not lower than that which follows drinking in the same person on an empty stomach. An analogous behavior is followed by the alcoholemic curve of patients suffering from diabetes mellitus. Insulin fails also to lower the alcoholemic curve in patients with diabetes although it retains the hypoglycemic action on the blood. Histamine, which produces a lowering of the alcoholemic curve when administered to normal persons, fails to change the curve of patients suffering from gastric achylia. The same is the case with the administration of sodium dehydrocholate (decholin), a stimulative substance for the functions of the liver, when given to patients suffering from grave liver diseases. The results of the studies carried on by Baglioni and his school are showing the possibility of applying this knowledge to the clinical and physiologic fields. A first and important application is that of the comparative study of the curve of alcoholemia during fasting and after a meal (Serianni-Lolli's test for functions of the liver), which has proved to be of value in the interpretation of certain hepatic syndromes.

Professor Alessandrini spoke on diabetic polyneuritis. After reviewing the relations between diabetes and the reserves of vitamins and also between insulin and vitamin B, the speaker discussed the possibility of the development of frustrate forms of vitaminosis B in diabetes, as a result both of the limitations of food and of the pathologic conditions of the organs concerned with digestion in the diabetic. It results, from recent investigations of several authors, that the daily need of vitamin B is in direct relation to the individual alimentary habits and that persons who habitually take into their system a certain amount of the vitamin lose the faculty of forming it synthetically. The use of insulin causes an aggravation of beriberi because it leads to a consumption of the vitamins in reserve in the body.

Professor Egidi spoke on surgery in cancer of the rectum. The operation should begin by closing the routes through which metastasis might occur. The larger part of recurrences originate in the periproctic connective tissues. Therefore the operation should be wide both vertically and transversally. Preservation of the anal portion is advisable whenever the distance of the tumor to the anal region permits preservation. Egidi prefers a technic by which removal of the tissues is performed from upper to lower segments of the rectum, because this technic gives the opportunity of cutting off the lymphatic routes of possible propagation of metastases at the beginning of the operation and also of ligating the superior hemorrhoidal artery above its anastomosis to the sigmoid artery. The speaker reported in 1928, before the Società di Chirurgia, twelve cases with a mortality of 50 per cent and also sixteen operations, performed from the lower to the upper segments of the rectum, with a mortality of 25 per cent. From that time on he performed the operation from the upper to the lower segments of the rectum in forty-one cases, with a mortality of 19 per cent.

Frequency of Tuberculous Meningitis

Dr. Giordano, in a lecture recently delivered to the Società Medica of Catania said that tuberculous meningitis developed in ninety-eight cases out of a group of 806 cases of tuberculosis seen by him during his practice. The infrequency of tuberculous meningitis in adults is rather relative: The disease develops in 7 per cent of the cases in patients above 30 years of age and in 16 per cent of the cases in patients below that age. The forms of tuberculosis which more frequently are complicated by meningitis are, besides miliary and acute pulmonary tuberculosis, pulmonary tuberculosis of the fibrous type and also tuberculosis of the lymph nodes, which may escape diagnosis during the clinical examination of the patient.

The Reticulo-Endothelial System

Dr. Santojanni, in a recent lecture before the Accademia delle Scienze Medico-Chirurgica of Naples, reported the results of experiments that were performed with the aim of investigating the behavior of the reticulo-endothelial system in rabbits with provoked hyperlipemia. The frequency of lipidosis in the clinical field and the importance of the problems involved in the genesis of the syndrome give importance also to the study of the behavior of the reticulo-endothelial system, a specific activity of which controls the metabolism of lipids. The experiments were performed in rabbits treated with lithium carmine and by the administration of daily intravenous injections of lecithin lutein. The worker found that the skin acts as a depot for accumulation of lipids when the equilibrium of the blood is disturbed because of the presence of lecithin and lutein in the blood. The functions of lipid accumulation and storage are performed by the cells of the keratopoietic tissues and also by those of the reticulo-endothelial system. The latter acts by a triple mechanism, by which the activity of its cells for seizing the lipids is stimulated, the morphologic characteristics of its cells are modified and the cells themselves spread as in a net, in a wide surface appearing under the form of hyperplasia of all the connective cells of the skin. The specific and characteristic activities of the reticulo-endothelial system are more intense in the cutaneous areas that have been made hyperemic by repeated massage than in the areas of normal skin, while no modifications are provoked by the stimulation of the skin by weak doses of roentgen irradiations.

Plastic Induration of Penis

Dr. Celli recently reported three cases of sclerosis of the cavernous bodies in members of the same family. Plastic induration is characterized by the presence of fibrous and nodular infiltrates beneath the tunica albuginea in one or both cavernous bodies of the penis. As a rule the infiltrates appear separately in the cylindric, round or ovular forms. They are more perceptible during erection. The sexual functions may be either diminished or absent, because of mechanical causes. Two forms, the essential, or primary, and the secondary, can be differentiated. Primary sclerosis is the manifestation of an arthritic diathesis. It originates in local accumulation of salts, such as uric acid and sodium and calcium urates, which may result in the formation of calcified concretions and even in processes of partial ossification. Secondary sclerosis, on the other hand, follows previous processes of inflammation, infection and trauma. Prognosis and treatment depend on the form, either primary or secondary, of the condition. An antiuric-acidemic treatment is indicated in the primary form, in which, however, surgical intervention gives either uncertain or nonsufficient results.

Meeting of Dermatologic Society

The second reunion of the Sicilian Section of the Società Italiana di Dermatologia e sifilografia took place recently at the clinica dermosifilopatica of Palermo, under the chairmanship of Professor Tommasi. Dr. Flarer reported a case of atypical primary cutaneous lymphocytoma simulating a patch of psoriasis. The absence of the Auspitz sign, the presence of moderate infiltration and the fact that the cutaneous lesion was the only one which made its appearance failed to support a diagnosis of psoriasis. The examination of tissue removed for biopsy showed a thick infiltrate and foci of small lymphocytes. There was a lymphocytosis (66 per cent), discovered by examination of the blood.

Dr. Monacelli spoke on the diagnosis of cutaneous leishmaniosis. His method consists in producing an intradermal reaction following the administration of a specific vaccine. In many cases with atypical clinical symptoms in which several serologic methods in use had given uncertain results, the speaker's seroreaction gave positive results.

Deaths

Dr. Guglielmo Oliaro, the founder and editor of *Lotte Sanitarie*, of *Minerva Medica* and of other journals of specialties recently died in Turin.

Marriages

Robert L. Tolle, St. Louis, to Miss Mary Virginia Murphy of Mulberry, Fla., in Lakeland, Fla., recently.

Alfred Leslie Duncombe to Miss Louise Howard Flagg, both of Brockton, Mass., May 15.

Herman G. Eichhorn, Peoria, Ill., to Mrs. Mary McMeehan Choate of Carthage, March 28.

John A. Victor to Miss Ruth Withington, both of New York, March 14.

John A. Knauf, Chilton, Wis., to Miss Dorothy Dhein, recently.

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Deaths

Herbert Lee Alkire, Topeka, Kan.; Jefferson Medical College of Philadelphia, 1887; in 1908 a member of the House of Delegates of the American Medical Association; member of the Kansas Medical Society and the American Academy of Ophthalmology and Oto-Laryngology; formerly professor of anatomy and otology, Kansas Medical College, Medical Department of Washburn College, Topeka, and associate professor of oto-rhinolaryngology, University of Kansas School of Medicine, Kansas City; on the staff of St. Francis Hospital; aged 73; died, April 27, of arteriosclerosis.

Arthur Robin Edwards ● Boston; Chicago Medical College, 1891; professor of principles and practice of medicine and clinical medicine, 1897-1917, and later dean, Northwestern University Medical School; member of the Illinois State Medical Society and the Association of American Physicians; was attending physician to the Cook County, Mercy, Michael Reese, Wesley and St. Luke's hospitals, Chicago; author of a textbook, "Principles and Practice of Medicine"; aged 68; died, May 17.

Jacob Warren Newman ● New Orleans; Hessische Ludwigs-Universität Medizinische Fakultät, Giessen, Hesse, Germany, 1898; Tulane University of Louisiana School of Medicine, New Orleans, 1902; professor of obstetrics, emeritus, Tulane University Graduate School of Medicine; fellow of the American College of Surgeons; for many years on the staff of the Touro Infirmary; aged 61; died, May 1.

Louis Alfred Roller, Grand Rapids, Mich.; Rush Medical College, Chicago, 1881; member of the Michigan State Medical Society and the American Academy of Ophthalmology and Oto-Laryngology; for many years a member and formerly president of the city board of health; honorary member of the staff of the Butterworth Hospital; aged 81; died, May 4.

Michael Lawless Ryan, Syracuse, N. Y.; Syracuse University College of Medicine, 1913; member of the Medical Society of the State of New York; instructor in clinical medicine at his alma mater; aged 44; vice president of the medical staff of St. Joseph Hospital, where he died, March 4, of carcinoma of the colon and liver.

Nathan Starr ● Charleston, Ill.; Hahnemann Medical College and Hospital, Chicago, 1889; past president of the Coles County Medical Society; for many years member and president of the board of education; on the staff of the M. A. Montgomery Memorial Sanatorium; aged 76; died, March 18, of bronchopneumonia.

Charles Hodge Wallace Jr. ● St. Joseph, Mo.; University of Pennsylvania School of Medicine, Philadelphia, 1924; fellow of the American College of Surgeons; member of the staffs of the Missouri Methodist and St. Joseph's hospitals; aged 36; died, April 26, in Rochester, Minn., of meningitis following a mastoid operation.

Nichols Peterson, Tifton, Ga.; Louisville (Ky.) Medical College, 1890; member of the Medical Association of Georgia; formerly member of the state board of medical examiners, state legislature and school board; aged 68; died, March 13, in the Coastal Plain Hospital, of pneumonia as the result of a fall.

James Bernard Maguire, Terre Haute, Ind.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1907; member of the Indiana State Medical Association; formerly deputy coroner; aged 53; died, March 2, in the Union Hospital, of cerebral hemorrhage.

Clarence Eugene Kjos ● Mount Vernon, Wash.; Rush Medical College, Chicago, 1924; past president of the Skagit County Medical Society; member of the Pacific Coast Oto-Ophthalmological Society; on the staff of the Mount Vernon General Hospital; aged 36; died, March 26, of influenza.

George William Augustin, Oneonta, N. Y.; New York Homeopathic Medical College and Hospital, 1899; served during the World War; city health officer; aged 59; on the staff of the Aurelia Osborn Fox Memorial Hospital, where he died, March 28, of cirrhosis of the liver and chronic nephritis.

Richard F. Marrs, Macomb, Ill.; Eclectic Medical Institute, Cincinnati, 1889; member of the Illinois State Medical Society; president of McDonough County Medical Society; member of the board of health; aged 74; on the staff of the Marietta Phelps Hospital, where he died, March 18, of heart disease.

Joseph Bynum Stanley, Jackson, La.; Memphis (Tenn.) Hospital Medical College, 1904; member of the Louisiana State Medical Society; member of the staff of the East Louisiana State Hospital; aged 54; died, February 23, in Memphis, of cerebral thrombosis and bronchopneumonia.

Daniel Richard Cornelius, Florence, Ala.; Atlanta (Ga.) School of Medicine, 1908; member of the Medical Association of the State of Alabama; served during the World War; aged 54; on the staff of the Coffee Memorial Hospital, where he died, March 13, of cerebral hemorrhage.

John Leverett, Yonkers, N. Y.; College of Physicians and Surgeons, Medical Department of Columbia College, New York, 1891; member of the Medical Society of the State of New York; aged 69; on the staff of St. John's Riverside Hospital, where he died, March 2, of pneumonia.

Judson Coleman King, Sona Bata, Belgian Congo, Africa; University of Michigan Homeopathic Medical School, Ann Arbor, 1913; an associate fellow of the American Medical Association; for many years a medical missionary; aged 56; died, March 27, of pernicious anemia.

Henry C. Amos ● Denton, Texas; Memphis (Tenn.) Hospital Medical College, 1911; past president of the Denton County Medical Society; formerly county health officer; at one time on the staff of the Denton Hospital and Clinic; aged 51; died, March 26, of lobar pneumonia.

Gustavus Schlegel, New York; College of Physicians and Surgeons, Medical Department of Columbia College, New York, 1883; member of the Medical Society of the State of New York; aged 77; died, March 5, in the Lenox Hill Hospital, of erysipelas and arteriosclerosis.

John Mell Smith, Starke, Fla.; University of Georgia Medical Department, Augusta, 1912; served during the World War; physician of the Civilians' Conservation Corps; aged 50; died, March 3, in the Veterans Administration Facility, Lake City, Fla., of abscess of the liver.

Charles Richard Sista, Trenton, N. J.; Medico-Chirurgical College of Philadelphia, 1915; member of the Medical Society of New Jersey; served during the World War; aged 45; on the staff of St. Francis Hospital, where he died, March 13, of Hodgkin's disease.

Francis E. Brown ● Catonsville, Md.; University of Maryland School of Medicine, Baltimore, 1893; affiliated with the United States Public Health Service during the World War; on the staff of the Spring Grove State Hospital; aged 69; died, March 9.

Arthur Henry Perry, Berea, Ohio; Cleveland Medical College, 1897; Cleveland College of Physicians and Surgeons, Medical Department, Ohio Wesleyan University, 1899; formerly health officer; aged 79; died, February 28, in the Community Hospital.

Samuel J. Bradbury, Lynbrook, N. Y.; Bellevue Hospital Medical College, New York, 1880; member of the Medical Society of the State of New York; bank president; formerly health officer of Lynbrook; aged 82; died, March 28, of arteriosclerosis.

William Douglas Ward ● Rochester, N. Y.; University of Pennsylvania Department of Medicine, Philadelphia, 1899; fellow of the American College of Surgeons; on the staffs of the Park Avenue and Monroe County hospitals; aged 61; died, May 14.

David Benjamin Beach ● Hamilton, Texas; Memphis (Tenn.) Hospital Medical College, 1907; secretary of the Hamilton County Medical Society; part owner of the Hamilton Sanitarium; aged 52; died, March 18, in a hospital at Waco.

Henry A. Zimmerman, Hollsopple, Pa.; Medical College of Ohio, Cincinnati, 1905; member of the Medical Society of the State of Pennsylvania; formerly bank president and county coroner; aged 53; died, March 16, of cerebral hemorrhage.

Samuel Isaac Conduff, Roanoke, Va.; Baltimore Medical College, 1898; member of the Medical Society of Virginia; aged 60; died, March 18, in the University of Virginia Hospital, University, of hypertensive arteriosclerotic heart disease.

Geza Nemet ● New York; Magyar Királyi Pázmány Petrus Tudományegyetem Orvosi Fakultasa, Budapest, Hungary, 1919; on the staff of the Montefiore Hospital for Chronic Diseases; aged 40; died, March 1, of bronchopneumonia.

Henry Lerner ● Brooklyn; University and Bellevue Hospital Medical College, New York, 1910; president of the board of directors and chief of the medical staff of the Crown Heights Hospital; aged 50; died, March 6, of heart disease.

Lorenzo Walter, Spokane, Wash.; Northwestern University Medical School, Chicago, 1928; member of the Washington State Medical Association; aged 35; died, March 25, of complications resulting from an infection of the hand.

David Donald, Victoria, B. C.; L.R.C.P., Edinburgh, L.R.C.S., Edinburgh, L.F.P. & S., of Glasgow, Scotland, 1892; University of Durham College of Medicine, Newcastle-upon-Tyne, England, 1908; aged 70; died, February 2.

Walter Edward King ● Detroit; Detroit College of Medicine, 1914; member of the American Society of Clinical Pathologists; laboratory executive of Parke, Davis & Co.; aged 58; died, May 1, of coronary thrombosis.

Robert Kabus Jr., New York; University and Bellevue Hospital Medical College, New York, 1905; member of the Medical Society of the State of New York; consultant to the Midtown Hospital; aged 57; died, March 2.

Thomas Leland Baxter ● Newark, Ohio; Rush Medical College, Chicago, 1902; past president of the Licking County Medical Society; on the staff of the Newark Hospital; aged 56; died, March 7, of pneumonia and meningitis.

Francis Gilchrist Jones, Atlanta, Ga.; Atlanta College of Physicians and Surgeons, 1910; member of the Medical Association of Georgia; aged 49; died, March 2, in a local hospital, of complications following an appendectomy.

Robert D. Lange, Cincinnati; Kungl. Universitetet i Uppsala Medicinska Fakulteten, Sweden, 1902; director of the roentgen ray department of the Longview Hospital; aged 54; was killed, February 21, when struck by an automobile.

Oscar Silas Cox, McArthur, Ohio; Starling Medical College, Columbus, 1892; member of the Ohio State Medical Association; president and formerly secretary of the Vinton County Medical Society; aged 70; died, March 19.

Hugh Moran Anderson, Sanatorium, Miss.; College of Physicians and Surgeons, Baltimore, 1907; veteran of the Spanish-American War; on the staff of the State Tuberculosis Sanatorium; aged 55; died, February 6.

Charles B. Schoales, Philadelphia; University of Pennsylvania Department of Medicine, Philadelphia, 1886; member of the Medical Society of the State of Pennsylvania; aged 71; died, March 17, of chronic myocarditis.

John T. Carter, Triadelphia, W. Va.; Medical College of Ohio, Cincinnati, 1874; member of the West Virginia State Medical Association; aged 85; died in March, of empyema of the gallbladder and chronic nephritis.

Marcus Earl Wilson ● Phoenix, Ariz.; Medical College of Ohio, Cincinnati, 1907; member of the Associated Anesthetists of the United States and Canada; aged 53; died, March 29, of pulmonary tuberculosis.

Philip Beekman ● Natchez, Miss.; Bellevue Hospital Medical College, New York, 1888; formerly on the staff of the Natchez Charity Hospital; aged 71; died, February 14, of cerebral thrombosis and arteriosclerosis.

James Daniel Blevins, Beaumont, Texas; University of Texas School of Medicine, Galveston, 1915; served during the World War; aged 54; died, March 8, in the William Beaumont Hospital, El Paso, of pneumonia.

Harry Reginald Williams, Lincoln, Ill.; Loyola University School of Medicine, Chicago, 1931; member of the Illinois State Medical Society; on the staff of the Lincoln State School and Colony; aged 31; died, March 4.

Henry Valentine McLaughlin, Boston; L.R.C.S., Ireland, 1884, and L.R.C.P., Edinburgh, 1884; an Affiliate Fellow of the American Medical Association; aged 79; died, February 15, of coronary thrombosis.

Emma Jane Davies Pronger, Denver; University of Nebraska College of Medicine, Homeopathic Department, Lincoln, 1885; Hahnemann Medical College and Hospital, Chicago, 1886; aged 73; died, March 9.

Robert Lewis Sample, Summit, Ga.; Bellevue Hospital Medical College, New York, 1892; member of the Medical Association of Georgia; aged 68; died, March 12, of pneumonia following influenza.

Bartolo Pedro Oliveros, Charleston, S. C.; University of Maryland School of Medicine, Baltimore, 1883; formerly on the staff of the Savannah (Ga.) Hospital; aged 75; died, March 2, of cerebral hemorrhage.

Florence Frances Rice, Boston; Tufts College Medical School, Boston, 1903; member of the Massachusetts Medical Society; aged 80; died, February 4, in the Boston State Hospital, of arteriosclerosis.

John Plumer Cole, Wheeling, W. Va.; College of Physicians and Surgeons, Baltimore, 1903; member of the West Virginia State Medical Association; aged 63; died, March 24, of coronary occlusion.

Willard Edwin Dinsmore, Claremont, S. D.; Jefferson Medical College of Philadelphia, 1886; member of the South Dakota State Medical Association; aged 77; died, February 14, of arteriosclerosis.

Albert Franklin Woodward, Detroit; Trinity Medical College, Toronto, Ont., Canada, 1885; aged 79; died, February 19, in the Highland Park (Mich.) General Hospital, of endocarditis and arteriosclerosis.

Palmer Augustus Potter, Summit, N. J.; Columbia University College of Physicians and Surgeons, New York, 1899; served during the World War; aged 62; died, March 16, of coronary occlusion.

James C. Osborne, Acworth, Ga.; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1897; member of the Medical Association of Georgia; aged 82; died, March 11, of bronchial asthma.

Samuel Riddle Proudfit, Youngstown, Ohio; Ohio Medical University, Columbus, 1898; member of the Ohio State Medical Association; on the staff of St. Elizabeth's Hospital; aged 69; died, February 18.

Walter White Burgess, Roanoke, Va.; Johns Hopkins University School of Medicine, Baltimore, 1934; assistant resident physician at the Jefferson Hospital; aged 28; died, March 16, of pneumonia.

Frank McMorrow, Syracuse, N. Y.; Bellevue Hospital Medical College, New York, 1893; member of the Medical Society of the State of New York; aged 65; was found dead, February 17.

William H. Golathorpe, Wellsburg, W. Va.; University of Wooster Medical Department, Cleveland, 1885; at one time mayor of Great Falls, Mont.; aged 78; died, February 7, of myocarditis.

Herman Fred Koestering, Kansas City, Mo.; Kansas City Hahnemann Medical College, 1907; aged 72; died, February 22, in St. Joseph's Hospital, of pyloric obstruction and postoperative pneumonia.

Joseph A. Cramp, Philadelphia; Medico-Chirurgical College of Philadelphia, 1891; member of the Medical Society of the State of Pennsylvania; aged 70; died, March 29, of bronchopneumonia.

Josiah S. Chastain, Prescott, Ark.; University of Nashville (Tenn.) Medical Department, 1903; member of the Arkansas Medical Society; aged 66; died, March 12, of coronary occlusion.

Duncan Allison, Welland, Ont., Canada; University of Toronto Faculty of Medicine, 1908; served with the Canadian Army during the World War; county coroner; aged 58; died, March 15.

Christian Edward Petersen, Richmond Hill, N. Y.; Long Island College Hospital, Brooklyn, 1897; for ten years medical inspector for the state department of education; aged 60; died, March 5.

David Harvey Nichol, London, Ont., Canada; Queen's University Faculty of Medicine, Kingston, 1919; medical director of the Westminster Hospital; aged 39; died, February 2.

Edward Michael Morrina, Whittier, Calif.; University of the City of New York Medical Department, 1890; aged 74; died, February 17, of myocarditis and chronic rheumatoid arthritis.

Arthur C. Norton, Middletown Springs, Vt.; New York Homeopathic Medical College, 1882; member of the Vermont State Medical Society; aged 76; died suddenly, February 10.

Latta Arthur Crandell, Lewisport, Ky.; University of Louisville Medical Department, 1911; aged 46; died, March 28, in the Owensboro (Ky.) City Hospital, of lobar pneumonia.

George Sidney Mothersill, Ottawa, Ont., Canada; McGill University Faculty of Medicine, Montreal, Que., Canada, 1902; aged 56; died, February 18, of carbon monoxide poisoning.

William Zitron ● Merrick, N. Y.; University and Bellevue Hospital Medical College, New York, 1928; aged 32; died, March 1, in the New York Hospital, of agranulocytosis.

Harry Dash Johnson ● Daytona Beach, Fla.; Bellevue Hospital Medical College, New York, 1897; member of the state board of health; aged 59; died, February 27.

Joseph Myers, Albany, Ore.; College of Physicians and Surgeons, Keokuk, Iowa, 1866; Civil War veteran; for many years city health officer; aged 95; died, February 10.

Ruth Meitin, Chicago; Rush Medical College, Chicago, 1935; aged 24; assistant in the radiologic department of Billings Hospital, where she died, March 16, of pneumonia.

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Lemon R. Markley, Bellingham, Wash.; Omaha Medical College, 1883; for many years city health officer and member of the board of health; aged 76; died, February 11.

Robert Innis Bromley, Sonora, Calif.; University of California Medical Department, 1882; aged 79; died, February 1, of bronchopneumonia, nephritis and arteriosclerosis.

William Ness, Westmount, Que., Canada; L.R.C.P., Edinburgh, L.R.C.S., Edinburgh and L.F.P.S., Edinburgh, 1903; aged 58; died in February, of pneumonia.

Thomas H. Duckett, Lamar, Mo.; Kansas City Medical College, 1889; formerly member of the state legislature; aged 81; died, February 23, of thrombosis.

Lawrence Joshua Davis, Dixons Mills, Ala.; Medical College of Alabama, Mobile, 1895; aged 62; died, February 11, of disease of the prostate gland.

William H. Wallace, Callery, Pa.; Homeopathic Hospital College, Cleveland, 1884; aged 72; died, February 20, of cerebral hemorrhage and arteriosclerosis.

William N. Bragg ● Reading, Ohio; Medical College of Ohio, Cincinnati, 1897; aged 68; died, February 21, of myocarditis and coronary thrombosis.

William D. Delzell, Springfield, Mo.; St. Louis Medical College, 1877; formerly member of the state legislature; aged 91; died, February 9.

Alfred P. Stoddart, Orangeville, Pa.; Hahnemann Medical College of Philadelphia, 1880; aged 78; died, February 6, of cerebral hemorrhage.

Jacob D. Richer, Warsaw, Ind.; Hahnemann Medical College and Hospital, Chicago, 1896; aged 69; died, February 28, of arteriosclerosis.

John G. Biller, Spadra, Calif.; Detroit Medical College, 1884; aged 76; died, February 24, of diabetes mellitus and arteriosclerosis.

Charles Kelsey Osborne, Dayton, Wash.; Denver College of Medicine, 1899; aged 63; died, February 17, of a self inflicted bullet wound.

John Harvey Carr, Maynardville, Tenn.; University of Tennessee Medical Department, Nashville, 1900; aged 63; died, February 27.

Dugald D. Munro ● Kinde, Mich.; Detroit College of Medicine, 1891; aged 70; died, February 22, of acute dilatation of the heart.

George Robert Waite, Kiowa, Kan.; Illinois Medical College, Chicago, 1901; aged 59; died, February 27, of cerebral hemorrhage.

John W. Taylor, Luthersville, Ga.; Atlanta Medical College, 1875; postmaster; aged 81; died, February 25, of lobar pneumonia.

William H. Green Jr., Newark, N. J.; Long Island College Hospital, Brooklyn, 1912; aged 45; died, February 13, of acute nephritis.

Thomas S. Watson, Bevier, Mo.; Missouri Medical College, St. Louis, 1882; aged 78; died, February 10, of angina pectoris.

Charles W. Carter, Mount Pleasant, Iowa (licensed in Iowa in 1886); aged 83; died, February 2, of gangrene of the foot.

Thomas J. Woods, Evening Shade, Ark.; Kentucky School of Medicine, Louisville, 1876; aged 85; died, February 18.

Aaron Strashun, Cincinnati; Chattanooga (Tenn.) Medical College, 1895; aged 69; died, February 28, of myocarditis.

John A. McCorkle, Ponchatoula, La. (licensed in Louisiana in 1895); aged 77; died, March 8, of cerebral hemorrhage.

Paul Plez Cooper, Alma, Ga.; Hospital Medical College, Atlanta, 1911; aged 46; died, March 10, of heart disease.

William Reid, Wyoming, Ont., Canada; University of Toronto Faculty of Medicine, 1904; died, February 4.

Albert S. Kunin, Detroit; Detroit College of Medicine, 1928; aged 34; died, March 2, of morphine poisoning.

Walter John Graves, Brookline, Mass.; Boston University School of Medicine, 1899; aged 72; died, February 20.

Emma Connor, Belleville, Ont., Canada; University of Toronto Faculty of Medicine, 1902; died, February 16.

Jacob Ernest Gaddis, Beaver, Pa.; Jefferson Medical College of Philadelphia, 1888; aged 75; died, March 14.

William Francis Keppel, Brooklyn; Long Island College Hospital, Brooklyn, 1897; aged 61; died, February 8.

Frederick William Hill, Ottawa, Ont., Canada; Trinity Medical College, Toronto, 1903; died, February 25.

Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

THYROTOXICOSIS DURING TREATMENT OF OBESITY

To the Editor:—A woman, aged 22, who has been married about six months, has always been from 10 to 20 pounds (4.5 to 9 Kg.) overweight. Tonsillectomy was done at 8 years of age, appendectomy recently. During the past eight months, she has noticed that she has gained more weight around the hips and thighs, the rest of the body remaining the same. She is 5 feet (152 cm.) tall and weighs 128 pounds (58 Kg.). Eighteen months ago she weighed 138 pounds (63 Kg.), but the excess was well proportioned over the entire body. Under rigorous dietary restriction for ten months she lost 16 pounds (7.3 Kg.). At present, in spite of moderate dietary restriction, she is gaining weight about the hips and thighs. The hands are small. The legs are well shaped and slender, as compared to the thighs. The breasts are fairly large and pendulous. There is no mental retardation, but the patient complains frequently of drowsiness and usually sleeps ten hours out of every twenty-four. She has a good appetite; there is slight constipation. The heart is normal, the pulse rate 90, the blood pressure 105 systolic, 70 diastolic. The patient is often very nervous and easily excited. She cries at the slightest provocation. There is occasional nausea and temporal headache. Menstrual periods occur regularly every twenty-six days with a fairly profuse flow, slight headaches and moderate dysmenorrhea. Menstruation began at 11, and the secondary sex characteristics appeared early. There is no frigidity, and the uterus is of normal size, though retroverted. The basal metabolic rate was minus 24 two and one-half months ago. She was put on desiccated thyroid, 1 grain (0.065 Gm.) three times a day for ten days, then 1 grain twice a day, for ten days, and 1 grain daily since that time. When the patient first began thyroid, the pulse went to 125 and she became more nervous. Thyroid was discontinued for one week and then started again. While she was taking 2 grains (0.13 Gm.) daily, her pulse was 110 and the nervousness continued. She has been taking 1 grain a day for the past six weeks. This causes her to be more nervous than normal; the pulse rate is 96. Her appetite is good, but the constipation continues, and despite a diet of 1,500 calories daily the patient is slowly and constantly gaining weight. Most of the gain in weight is taking place about the hips and thighs. The patient's mother and sister live in another town but are reported to be of the same type, except that the obesity is much more marked, especially around the hips and thighs, and, in the mother, also around the shoulders. Their basal metabolic rates are also low, and thyroid medication has been ineffectual in their cases also. Is this a case of pituitary obesity? Do you think that pituitary lobe preparations should be given? What type would you suggest? Should dietary restrictions and thyroid be discontinued? I assure you that I will appreciate your help in this matter. Kindly omit name and town.

M.D., Texas.

ANSWER.—Although the "girdle obesity" has sometimes been ascribed to ovarian dysfunction, there is nothing in the description of this case from which a diagnosis of "endocrine obesity" can be made. The endocrine balance that determines the physical type or constitution of the individual, like the physiognomy, is an inherited attribute. The description of the mother and the sister makes it seem probable that the patient's difficulties as regards the distribution of fat arise not from her own glands but from those of her ancestors. Unfortunately our present knowledge of endocrinology is as yet inadequate to cope with the problem of the redistribution of local fat depots.

As contrasted with the distribution of adipose tissue, the problem of total overweight is much simpler. The patient is either sensitive to thyroid or she is taking more of it than has been prescribed. At any rate she is suffering from overdosage of this substance. In addition, she is consuming sufficient food to gain weight in spite of her increased metabolic rate. The administration of thyroid should be stopped, and the substitution of any other glandular preparation or medication is not recommended. The basal metabolic rate of minus 24 observed two and one-half months ago does not necessarily indicate a hypothyroidism. It should be remembered that the normal variation in the basal metabolic rate is as low as minus 15. The fact that the method of calculating the basal metabolic rate renders the values for overweight individuals falsely low, by assuming a normal proportion of active to inert tissue, should also be taken into account. It is possible that a recalculation of the metabolic reading on the basis of the ideal rather than the actual weight would result in a value within the normal range.

Regardless of the state of her endocrine glands, the proper reduction of the patient depends on decreasing the caloric intake below the level of the energy output. In such cases as this it is often wise to hospitalize the patient so that the effects of a known and measured caloric intake can be demonstrated for

the benefit of both patient and physician. When it has been demonstrated to the patient that she can reduce on a correct dietary regimen, and after she has been reduced to her proper weight, the permanence of the cure depends on whether the patient has acquired a good "food habit" for her previous bad one.

URTICARIA

To the Editor:—A white woman, aged 39, has chronic urticaria. This first developed during a vacation in August while the patient was at a Minnesota lake region, and she believes that she may have contracted her hives from swimming. There is no history of previous allergic phenomena. She is married and has a normal child 16 years of age. General physical examination is essentially negative except for urticarial lesions and secondary lesions due to scratch marks. There is apparently no source of the urticarial origin to be found in the sinuses, lungs, gallbladder or thyroid. Laboratory examinations, including Wassermann, blood, urine and stools, are negative. The numerous patch tests have not been run as yet. Since the original severe attacks following her vacation in August the condition has improved; however, there are some lesions present almost daily, with exacerbations varying at times to a moderate angioneurotic edema. In addition to symptomatic therapy the patient has been on calcium, acid, alkali and quinine therapy. I have also tried typhoid vaccine and autohemotherapy as nonspecific measures. The patient has likewise been on Rowe's eliminative diets, with no improvement. She is using the so-called nonallergic cosmetics. All methods of therapy have been only of transient benefit. Is it possible that she may have acquired this urticaria from swimming? If so, why does the urticaria persist? Have you any further suggestions as to therapy? Should I perform the numerous patch tests? If so, is it probable that these will be of slight benefit in determining the specific allergen? Would the specific allergen be more apt to be found in dust rather than the food groups? Please omit name.

M.D., North Dakota.

ANSWER.—It is unlikely that the urticaria in this case is related to swimming. The cause of the condition should be looked for in foods and possibly drugs, since these are the commonest factors in urticaria. Tests should be done, preferably by the intracutaneous method rather than by the scratch method, since the former is more likely to give positive reactions. Patch tests seldom are indicated in urticaria, even if the condition is due to environmental substances. Positive reactions are obtained in about 50 per cent of the cases tested intracutaneously. Even when a test is positive, its clinical significance must be determined both by elimination and by observation of the effect of the material on the patient. If tests are negative, a careful food diary may be of help. The foods eaten within twelve hours preceding the onset of an attack, and especially those of the meal preceding the attack, should be recorded. After a number of meals, eaten before the onset of attacks, have been recorded, an analysis of the foods common to all these meals frequently gives a clue to the cause of the condition.

Regarding additional therapy, nonspecific treatment with stock vaccines has been used, with the report of some success in persistent cases.

INJURIOUS EFFECT OF CHLORINE IN PAPER MILL

To the Editor:—Please send to me at once any available data that you may have on the effect of the so-called bleach gas, which is produced in the process of manufacture and bleaching paper manufactured in Wisconsin mills, of rag content. I am particularly interested in the effect and its probable relation or cause of bronchial asthma and its likelihood of relation to a first attack after a short exposure.

M.D., Wisconsin.

ANSWER.—The bleaching agent in Wisconsin paper mills devoted to rag paper manufacture is likely to be chlorine derived from chlorinated lime. In other Wisconsin mills engaged in the manufacture of paper from wood pulp, sulfur dioxide, a bleaching agent, might be present, but primarily from the sulfite process and not from any direct use as a bleach. As little as 15 parts of chlorine per million of air will produce immediate irritation of the throat. Indefinite exposure should not be permitted when concentrations are in excess of 1 part of chlorine per million. Chlorine is nearly twenty times as toxic as hydrochloric acid, and certainly no doubt can be entertained as to its immediate action in bringing about prompt respiratory inflammation and pulmonary edema. But for a long time dispute has raged over the remote effects of chlorine gassing. Apparently one single severe gassing, such as commonly takes place in warfare, is followed by acute episodes including severe immediate sequelae; but, if recovery from the acute effects is once procured, no permanent damage is expectable. Apparently this is not true for industrial exposures in which day by day the inhalation of relatively low concentrations occurs. Some such exposed workers may develop emphysema, chronic bronchitis or bronchial asthma. The new worker when first exposed may be much more susceptible to the action of the gas than longer exposed workmen. After a short time the new worker may accommodate himself to the injurious gas, but later in the course of months or years chronic manifestations may arise. It is possible that some workers become sensitized through the action of chlorine, but naturally the sensitization is not to the chlorine itself. The irritating action of the chlorine prepares the respiratory tract for sensitization by bacteria, or perhaps by new protein forms, produced by the chlorine in contact with the tissues of the breathing apparatus. The occurrence of injurious effects from exposure to chlorine in a paper mill is well within the realm of possibility.

POSTPARTUM ADYNAMIC ILEUS

To the Editor:—Recently I had a case of what appeared to be postpartum adynamic ileus. Do you feel that the condition is apt to recur in a succeeding postpartum period? The patient is a primipara. She presented other evidences of an unstable autonomic nervous system; viz., at the end of the first stage her blood pressure dropped to about 50 systolic and her pulse reached about 140. Her heart and lungs were apparently normal. There was no apparent bleeding and no evidence of concealed hemorrhage. The labor, under pentobarbital-scopolamine analgesia, had been relatively easy and short, and the analgesia had been satisfactory. As soon as it was recognized that the patient was in a condition of shock, the patient was rapidly delivered by low forceps and intravenous administration of 10 per cent dextrose in 1,000 cc. of saline solution instituted. During the intravenous therapy, which lasted about one-half hour, the patient suddenly recovered from the analgesia (and the ether which she had had during delivery) and began to talk in a perfectly oriented, alert manner. Her blood pressure in the meantime returned to 130 systolic. The abdominal distention developed within twelve hours or so and was extremely resistant to all the usual measures to relieve it, until four days later, when it gradually subsided. The distention was apparently chiefly of the small bowel rather than of the stomach or the large bowel. Please omit name.

M.D., Montana.

ANSWER.—This case is interesting, but not sufficient data have been provided to make a positive diagnosis possible.

There are two elements, which may or may not be related: The shock during delivery may have been nervous or due to the effect of the drugs administered, or possibly an acute hyperinsulinemia with hypoglycemia. Paralytic distention of the bowel during and after delivery, while of rare occurrence is sufficiently common to require attention. During labor it is explained as some disturbance of the autonomic system. It has followed injury and contusion to the bowel when the bowel is crushed by the manipulations used to express the placenta, and when it occurs in the puerperium a variety of reasons are given: (1) the one just mentioned; (2) the regurgitation of blood from the uterus through the tube into the peritoneal cavity; (3) minute extravasations of blood in the uterine peritoneum as the result of crushing the uterus, or of a mild toxemia analogous to abruptio placentae; (4) mild peritonitis resulting from the stirring up of a latent tubal infection, or (5) simply the lack of counterpressure from flaccid abdominal muscles, there being reduced tone in the intestinal walls, permitting gas to accumulate in the bowel. The combination in this case of shock and abdominal distention makes one suspect something organic rather than functional.

THERAPEUTIC ABORTION FOR TUBERCULOSIS

To the Editor:—A secundipara, aged 21, with moderately advanced pulmonary tuberculosis, is apparently four and one-half months advanced in pregnancy. Is evacuation desirable medically or possible legally and if so through what formality? What is today considered the most reliable operative (abdominal) procedure to obtain permanent sterility? Under what conditions can such an operation be legally performed in Illinois? Please omit name.

M.D., Illinois.

ANSWER.—The legality of inducing abortion is not well established by statute in most states but it is generally accepted that therapeutic abortion is justifiable legally as a life-saving procedure. Usually the supporting opinion and advice of one or more consultants is deemed necessary for the protection of the surgeon who performs the operation and of the institution in which it is done.

There is no way of obtaining legal sanction for the performance of this therapeutic procedure. Medically it may be justifiable from the point of view of treatment, and it appears that the indications are being gradually extended to include not only conditions which are an immediate threat to life but also those diseases which are made worse by pregnancy and tend to shorten life.

As far as tuberculosis is concerned, there are varying opinions relative to the therapeutic value of abortion in arresting the progress of the disease. In general, one has to consider the reaction of the pregnant woman, but, as a rule, the pregnancy would be considered a handicap in managing a case of pul-

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monary tuberculosis. Ordinarily if termination of the pregnancy seems desirable it should be done in the first trimester, and this period is one of the more serious so far as the indirect effect of the pregnancy on the tuberculous process is concerned. As a rule, the performance of an abortion for pulmonary tuberculosis after this period is not indicated.

Whether or not sterilization is justified depends on the prognosis for cure of the tuberculosis. Pregnancy is not believed to be desirable unless a cure has been established by a definite arrest of the disease processes. When a cure is not probable, sterilization is indicated; but consent of both husband and wife is necessary.

When therapeutic abortion and sterilization are both indicated, abdominal hysterotomy and tubal resection are desirable methods. Some form of tubal resection is the best form of sterilization. The uterine cornua may be excised with the proximal portion of the tube. The Madlener technic of crushing and tying the tubes is simple and quite efficacious, though some failures have resulted.

There is no mechanism by which legal permission may be obtained for the performance of an operation for sterilization in Illinois. The only protection is the following of justifiable medical indications and the securing of the consent of both husband and wife.

TREATMENT DURING MENOPAUSE

To the Editor:—Kindly outline a treatment for menopausal symptoms. What is the value of theelin and theelol (Parke-Davis) medication on these symptoms? Please omit name.

M.D., Chicago.

ANSWER.—Theelin and theelol are typical of the group of estrogenic substances which at present are being used in the treatment of "hot flushes," "nervousness," and insomnia associated with the menopause. Their use is based on the observed fact that after the menopause there may be decreased excretion of estrogenic substances. The inference is that menopausal vasomotor instability and similar menopausal symptoms are the result of a lack of estrogenic substance in the body. Many physicians believe that replacement therapy with the estrogenic group of drugs (theelin, theelol, amniotin, progynon, progynon-B) is an effective treatment of these subjective disorders of the menopause.

Sevringhaus finds that the dosage of the products used orally (theelol capsules, amniotin capsules, progynon tablets) must be about five times as large as that dosage of the preparations used for parenteral injection (theelin [aqueous], theelin in oil, amniotin in oil, progynon, progynon-B) to produce the same effect. He discusses the advantages of each type of medication and believes that the current cost of the drugs in equivalent dosage in terms of rat or of international units should be the deciding factor in selecting the product to be used. Treatment may be started with oral dosage of 100 or 200 rat units (or the equivalent in international units) daily and increased or decreased as the response warrants. In severe cases 50 rat units a day may be given parenterally. A mild sedative is a helpful adjuvant.

Following are references:

Sevringhaus, E. L.: The Relief of Menopause Symptoms by Estrogenic Preparations, THE JOURNAL, Feb. 23, 1935, p. 624.
Bishkind, M. S.: Commercial Glandular Products, THE JOURNAL, Aug. 31, 1935, p. 667.
Novak, Emil: The Uses and Abuses of Modern Gland Products in Gynecologic Disorders, THE JOURNAL, Aug. 31, 1935, p. 662.
Glandular Physiology and Therapy, Chicago, American Medical Association, 1935.

BLOOD PRESSURE CHANGES IN PREGNANCY

To the Editor:—A woman, aged 36, has had a blood pressure of 160 systolic, 90 diastolic, since she was 24 years old and during this time she has had three children, the youngest being 5 years old, and shortly after she has conceived her systolic pressure drops to from 124 to 130, but within a month after delivery it returns to 160. Can you advise me as to what secretion during pregnancy might account for this? Please omit name.

M.D., Kansas.

ANSWER.—The phenomenon observed in this case is not infrequently encountered. An accurate explanation of the occurrence is difficult, if not impossible. One of the functions attributed to the pituitary is that of regulating the blood pressure. It is known that the ovary exerts some sort of counter regulatory effect on the pituitary. It is known that the ovarian secretion is altered during pregnancy and it therefore seems probable that such changes in blood pressure are due to some alteration in pituitary control. This statement, however, is not susceptible of proof of any sort and to be accurate one must say that it is impossible to say what secretion causes such blood pressure changes during pregnancy.

RETURN OF FUNCTION AFTER NERVE INJURY

To the Editor:—A woman fell from a step-ladder while hanging wallpaper in June 1935, and one leg went through a window. The glass was shattered and it severed the achilles tendon completely, also the posterior tibial artery and nerve, and another laceration severed the gastrocnemius muscle. The lacerations and achilles tendon were sutured. The posterior tibial nerve was also sutured end to end with fine black silk. The wounds healed without infection. However, the sensation has not yet returned to a small area on the plantar surface of the foot and the patient unwittingly burned this with a hot water bottle. The burn healed slowly but now from time to time what I believe are trophic ulcers develop here. What can be done to toughen the skin? Would it be wise to try a pedicle skin graft or might it not take? Any advice would be appreciated.

M.D., Michigan.

ANSWER.—It is still too early for complete return of sensory and trophic function in the area of distribution of the divided posterior tibial nerve. We know of nothing that will "toughen" the skin when its nerve supply has been destroyed and would be reluctant to try any type of graft or flap to cover the open wounds. They would be subject to the same handicap as the tissues at the site of the open wound which are temporarily deprived of their nerve supply. A graft or flap can live only if it develops a blood supply at the site at which it is transplanted, and the innervation of the tissues at the site of the open wound is an important factor in vascular function.

The most important considerations in the treatment of the patient's condition at this time are rest, elevation of the limb, patience and, above all, every possible effort to prevent adding additional infection from the outside.

GONORRHEAL EPIDIDYMITIS

To the Editor:—Please give me the correct treatment for a case of gonorrheal epididymitis of five months' duration with slight enlargement of the epididymis but rather marked tenderness on palpation, slight enlargement of the inguinal glands, and prostatitis, which has about cleared under weekly massage. A small amount of purulent discharge remains. The seminal vesicles were involved but seem to have recovered under weekly strippings. 1. Would gonococcus filtrate (Corbus-Ferry) be likely to be of benefit in this case? 2. May strenuous exercise be permitted? 3. What is the status of 1:5,000 aqueous solution of metaphen as a urethral injection? 4. Do you recommend intravesical irrigations? If so, with what solution? 5. Is bimonthly intercourse likely to prolong the infection indefinitely? 6. Is there still much likelihood of an arthritis developing? Please omit name and city.

M.D., Indiana.

ANSWER.—1. The benefit obtained from a gonococcus filtrate is questionable, but it might be tried.

2. Strenuous exercise should not be permitted in any infection of the genital tract.

3. This solution is of no more value in treatment than any of the other injections, such as the silver salts, which have stood the test of time.

4. Intravesical irrigations could be of little value in the treatment of a case like this.

5. All intercourse should be omitted in all cases of infection of the genital tract until the infection is cleared up.

6. There is always a possibility of arthritis complicating an infection of the genital tract.

ADVANTAGES OF HOMOGENIZATION OF INFANT FOODS

To the Editor:—Does homogenization in your opinion add much to digestibility?

STANLEY NICHOLS, M.D., Long Branch, N. J.

ANSWER.—Ready prepared homogenized vegetables, fruits and cereals are now being marketed. The process is advocated because it breaks down the cellular envelops and fibrous material. This allows more rapid and complete exposure to gastric and intestinal secretions, thereby hastening the process of digestion and at the same time facilitating more complete absorption of food elements. The more complete breaking down of fibrous bulk produces less mechanical irritation to the intestinal tract. Such finely divided foods are of primary advantage in the feeding of young infants and certain older children and adults needing a readily assimilated and nonirritating diet.

Prior to 1915, vegetables were a late addition to the infant's diet, usually being added toward the end of the second year or later. Well cooked and finely sieved vegetables have gradually been added at earlier dates, until now it is customary to give them between the fifth and sixth months of the first year. The importance of vegetables from a nutritional standpoint makes this earlier inclusion in the diet desirable. One of the chief difficulties of feeding them at an early age has been the resultant mechanical irritation. Homogenization attempts to overcome this difficulty.

QUININE SULFATE AND ABORTION

To the Editor:—Will you please give me the consensus as to whether quinine sulfate will cause abortion. Dr. De Lee states in his textbook that in conjunction with castor oil it will induce labor in about 30 per cent of cases at term, but he does not mention it as a method of inducing abortion. I have recently attended a case of abortion in which quinine had been used in the treatment of a cold. From all indications the fetus had died prior to the administration of the quinine, though the patient thinks that to be the cause. Please omit name if published.

M.D., Kentucky.

ANSWER.—Opinions are unequally divided regarding the effect of quinine on pregnancy. Most accoucheurs who practice in malarial districts use quinine regularly and freely and report that it does not produce abortion; on the contrary, they think that it prevents abortion in malarious gravidas. At the end of pregnancy, quinine seems to sensitize the uterus, and on rare occasions it may induce labor by itself; also it may strengthen the pains to a pathologic degree, but this is uncommon.

As a method of inducing abortion, even when given in large doses, it has failed, and in all probability some other cause must be sought in the case mentioned.

USE OF CHOLERETIC IN ABSENCE OF GALLBLADDER

To the Editor:—A contradiction in your column of the February 8 issue cannot go unnoticed. In your answer to the inquiry of Dr. D. R. Barr of Grand Rapids, Mich., the dose of a cholagogue was given for use in a patient who did not have a gallbladder. This therapy strikes me as being as efficacious as the administration of a pituitary-like product would be in a woman who has had a panhysterectomy. Certainly if the intrahepatic and extrahepatic bile ducts needed treatment in this particular case, the Council accepted Decholin—the true choleretic—would at least have been indicated and certainly clinically beneficial.

ZACHARY BLIER, M.D., Chicago.

ANSWER.—Sodium taurocholate is, like "decholin," "glycotauro" and other bile salt preparations, a substance that stimulates the secretory activity of the liver. It is a true choleretic and, as such, can act even when the gallbladder is absent.

SKIN TEST FOR BRUCELLA ABORTUS INFECTIONS

To the Editor:—In connection with an article on "The Prevalence of Mild Brucella Abortus Infections," by W. Beecher Scoville, which appeared in THE JOURNAL, Dec. 14, 1935, I should like to know where material for skin testing can be obtained.

JOHN B. BERSON, M.D., Wooster, Ohio.

ANSWER.—Brucella melitensis (abortus) vaccine (N. N. R.) may be used for skin testing. This vaccine is available through the usual trade sources.

Council on Medical Education and Hospitals

ADDITIONAL HOSPITALS APPROVED

The Council on Medical Education and Hospitals of the American Medical Association has given its approval to the following hospitals since the publication of the last previous list in THE JOURNAL, March 7, 1936:

Hospitals Approved for Intern Training

Brewster Hospital, Jacksonville, Fla.
St. Vincent's Hospital, Jacksonville, Fla.
Lutheran Memorial Hospital, Chicago.
Cambridge City Hospital, Cambridge, Mass.
Dallas Methodist Hospital, Dallas, Texas.
St. Mary's Hospital, Racine, Wis.

Hospitals Approved for Residencies in Specialties

Children's Hospital, Birmingham, Ala. Pediatrics.
Mary's Help Hospital, San Francisco. Surgery.
Eloise Hospital for Mental Diseases, Eloise, Mich. Neuropsychiatry.
St. Joseph Hospital, Kansas City, Mo. Pathology.
St. John's Hospital, Brooklyn. Pathology.
Mary Immaculate Hospital, Jamaica, L. I., N. Y. Pathology.
State Hospital for Crippled Children, Elizabethtown, Pa. Orthopedics.
Hahnemann Hospital, Philadelphia. Anesthesia.

Hospitals Approved for Additional Residencies

Provident Hospital, Chicago. Pathology.
Methodist Episcopal Hospital, Indianapolis. Anesthesia.
Harlem Hospital, New York City. Pathology.
Metropolitan Hospital, New York City. Orthopedics.
Watts Hospital, Durham, N. C. Medicine.
Geo. F. Geisinger Memorial Hospital, Danville, Pa. Otolaryngology.
Rhode Island Hospital, Providence, R. I. Anesthesia and cardiology.
John Sealy Hospital, Galveston, Texas. Medicine and neuropsychiatry.

Medical Examinations and Licensure

COMING EXAMINATIONS

STATE AND TERRITORIAL BOARDS

ALABAMA: Montgomery, June 23-25. Sec., Dr. J. N. Baker, 519 Dexter Ave., Montgomery.

ARIZONA: *Basic Science.* Tucson, June 16. Sec., Dr. Robert L. Nugent, Science Hall, University of Arizona, Tucson. *Medical.* Phoenix, July 7-8. Sec., Dr. J. H. Patterson, 826 Security Bldg., Phoenix.

CALIFORNIA: San Francisco, July 6-9, and Los Angeles, July 20-23. Sec., Dr. Charles B. Pinkham, 420 State Office Bldg., Sacramento.

COLORADO: Denver, July 7. Sec., Dr. Harvey W. Snyder, 422 State Office Bldg., Denver.

CONNECTICUT: *Basic Science.* New Haven, June 13. *Prerequisite to license examination.* Address State Board of Healing Arts, 1895 Yale Station, New Haven. *Medical (Regular).* Hartford, July 14-15. *Endorsement.* Hartford, July 28. Sec., Dr. Thomas P. Murdock, 147 W. Main St., Meriden. *Medical (Homeopathic).* Derby, July 14. Sec., Dr. Joseph H. Evans, 1488 Chapel St., New Haven.

DELAWARE: July 14-16. Sec., Medical Council of Delaware, Dr. Joseph S. McDaniel, Dover.

DISTRICT OF COLUMBIA: Washington, July 13-14. Sec., Commission on Licensure, Dr. George C. Ruhland, 203 District Bldg., Washington.

FLORIDA: Jacksonville, June 15-16. Sec., Dr. William M. Rowlett, P. O. Box 786, Tampa.

GEORGIA: Atlanta, June 10-11. Joint Sec., State Examining Boards, Mr. R. C. Coleman, 111 State Capitol, Atlanta.

HAWAII: Honolulu, July 13-16. Sec., Dr. James A. Morgan, 48 Alexander Young Bldg., Honolulu.

ILLINOIS: Chicago, June 23-26. Superintendent of Registration, Department of Registration and Education, Mr. Homer J. Byrd, Springfield.

INDIANA: Indianapolis, June 23-25. Sec., Board of Medical Registration and Examination, Dr. William R. Davidson, Room 5 State House Annex, Indianapolis.

IOWA: *Basic Science.* Des Moines, July 14. Sec., Prof. Edward A. Benbrook, Iowa State College, Ames.

KANSAS: Topeka, June 16-17. Sec., Board of Medical Registration and Examination, Dr. C. H. Ewing, 609 Broadway, Larned.

KENTUCKY: Louisville, June 10-12. Sec., State Board of Health, Dr. A. T. McCormack, 532 W. Main St., Louisville.

MAINE: Augusta, July 7-8. Sec., Board of Registration of Medicine, Dr. Adam P. Leighton, 192 State St., Portland.

MARYLAND: *Medical (Regular).* Baltimore, June 16. Sec., Dr. John T. O'Mara, 1215 Cathedral St., Baltimore. *Medical (Homeopathic).* Baltimore, June 9-10. Sec., Dr. John A. Evans, 612 W. 40th St., Baltimore.

MASSACHUSETTS: Boston, July 14-16. Sec., Board of Registration in Medicine, Dr. Stephen Rushmore, 413-F State House, Boston.

MICHIGAN: Detroit, June 8-10, and Ann Arbor, June 10-12. Sec., Board of Registration in Medicine, Dr. J. Earl McIntyre, 202-3-4 Hollister Bldg., Lansing.

MINNESOTA: Minneapolis, June 16-18. Sec., Dr. Julian F. Du Bois, 350 St. Peter St., St. Paul.

MISSISSIPPI: Jackson, June 22-23. Sec., State Board of Health, Dr. Felix J. Underwood, Jackson.

NEBRASKA: Omaha, June 9-10. Dir., Bureau of Examining Boards, Mrs. Clark Perkins, State House, Lincoln.

NEW JERSEY: Trenton, June 16-17. Sec., Dr. Arthur W. Belting, 28 W. State St., Trenton.

NEW YORK: Albany, Buffalo, New York, and Syracuse, June 22-25. Chief, Professional Examinations Bureau, Mr. Herbert J. Hamilton, 315 Education Bldg., Albany.

NORTH CAROLINA: Raleigh, June 15. Sec., Dr. Ben J. Lawrence, 503 Professional Bldg., Raleigh.

NORTH DAKOTA: Grand Forks, July 7-10. Sec., Dr. G. M. Williamson, 415 S. 3d St., Grand Forks.

OHIO: Columbus, June 16-19. Sec., State Medical Board, Dr. H. M. Platter, 21 W. Broad St., Columbus.

OKLAHOMA: Oklahoma City, June 10-11. Sec., Dr. James D. Osborn Jr., Frederick.

OREGON: *Medical.* Portland, June 16-18. Sec., Dr. Joseph F. Wood, 509 Selling Bldg., Portland. *Basic Science.* Corvallis, July 18. Sec., Mr. Charles D. Byrne, University of Oregon, Eugene.

PENNSYLVANIA: Philadelphia and Pittsburgh, July 7-11. Sec., Board of Medical Education and Licensure, Mr. Clarence E. Ackley, 400 Education Bldg., Harrisburg.

RHODE ISLAND: Providence, July 2-3. Chief, Division of Examiners, Mr. Robert D. Wheley, 366 State Office Bldg., Providence.

SOUTH CAROLINA: Columbia, June 23. Sec., Dr. A. Earle Boozer, 505 Saluda Ave., Columbia.

SOUTH DAKOTA: Rapid City, July 21-22. Dir., Division of Medical Licensure, Dr. Park B. Jenkins, Pierre.

TEXAS: Austin, June 23-25. Sec., Dr. T. J. Crowe, 918-19-20 Mercantile Bldg., Dallas.

UTAH: Salt Lake City, July 10. Dir., Department of Registration, Mr. S. W. Golding, 326 State Capitol Bldg., Salt Lake City.

VERMONT: Burlington, June 24. Sec., Board of Medical Registration, Dr. W. Scott Nay, Underhill.

VIRGINIA: Richmond, June 18-20. Sec., Dr. J. W. Preston, 28½ Franklin Rd., Roanoke.

WASHINGTON: *Basic Science.* Seattle, July 9-10. *Medical.* Seattle, July 13-15. Dir., Department of Licenses, Mr. Harry C. Huse, Olympia.

WEST VIRGINIA: Bluefield, July 13. State Health Commissioner, Dr. Arthur E. McClue, Charleston.

WISCONSIN: Milwaukee, June 30-July 3. Sec., Dr. Robert E. Flynn, 401 Main St., La Crosse.

WYOMING: Cheyenne, June 8. Sec., Dr. G. M. Anderson, Capitol Bldg., Cheyenne.

NATIONAL BOARD OF MEDICAL EXAMINERS

NATIONAL BOARD OF MEDICAL EXAMINERS. *Parts I and II.* June 22-24 and Sept. 14-16. Ex. Sec., Mr. Everett S. Elwood, 225 S. 15th St., Philadelphia.

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SPECIAL BOARDS

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY: Written examination and review of case histories of Group B candidates will be held in various cities in the United States and Canada Nov. 7. Sec., Dr. Paul Titus, 1015 Highland Bldg., Pittsburgh (6).

AMERICAN BOARD OF OPHTHALMOLOGY: New York, Sept. 26. *All applications and case reports must be filed sixty days before date of examination.* For information write to Rm. 2021, 58 E. Washington St., Chicago.

AMERICAN BOARD OF ORTHOPAEDIC SURGERY: Cleveland, Jan. 9. Sec., Dr. Fremont A. Chandler, 180 N. Michigan Ave., Chicago.

AMERICAN BOARD OF PEDIATRICS: Albany, N. Y., June 10, Baltimore and Cincinnati in November. Sec., Dr. C. A. Aldrich, 723 Elm St., Winnetka, Ill.

AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY: New York, Dec. 29-30. Sec., Dr. Walter Freeman, 1028 Connecticut Ave., Washington, D. C.

AMERICAN BOARD OF RADIOLOGY: Cleveland, Sept. 25-27. Sec., Dr. Byrl R. Kirklin, Mayo Clinic, Rochester, Minn.

North Dakota January Report

Dr. G. M. Williamson, secretary, North Dakota State Board of Medical Examiners, reports the examination held in Grand Forks, Jan. 7-10, 1936. The examination covered 13 subjects and included 100 questions. An average of 75 per cent was required to pass. Six candidates were examined, all of whom passed. Four physicians were licensed by reciprocity and 2 physicians were licensed by endorsement. The following schools were represented:

School	PASSED Year Grad.	Per Cent
Rush Medical College	(1935)	84.9
University of Louisville School of Medicine	(1934)	84
University of Michigan Medical School	(1934)	89.5
University of Minnesota Medical School	(1929)	85.5
University of Manitoba Faculty of Medicine	(1934)	85.3
McGill University Faculty of Medicine	(1933)	86.1

School	LICENSED BY RECIPROCITY Year Grad.	Reciprocity with
Chicago Homeopathic Medical College	(1889)	Illinois
State University of Iowa College of Medicine	(1926)	Iowa
University of Minnesota Medical School	(1933)	Michigan
St. Louis University School of Medicine	(1933)	Missouri

School	LICENSED BY ENDORSEMENT Year Grad.	Endorsement of
Northwestern University Medical School	(1935)	N. B. M. Ex.
University of Minnesota Medical School	(1934)	N. B. M. Ex.

Book Notices

Your Child in Health and in Sickness. By Hugh L. Dwyer, M.D., Associate Professor of Pediatrics, University of Kansas. Cloth. Price, $2.75. Pp. 333, with 38 illustrations. New York & London: Alfred A. Knopf, 1936.

This popular presentation of the home care and feeding of infants and young children "is an attempt to guide the mother to a correct understanding of present day practice in the prevention of diseases in childhood." The advice is sound but too general to be of real help to mothers. The book abounds in technical terms without a glossary. Many of the expressions are colloquial, "fat goes to produce heat" (p. 131); "vitamin C is better understood" (p. 179); "weighing and measuring campaigns" (p. 187); "the infant does not localize pain well" (p. 290). The statement that "this is the most complete book on the care and feeding of children that has as yet been written" is not borne out by its contents. Among the topics lacking are training in the control of bowel and bladder function; home treatment of bad breath, toothache, hiccup, croup, sunburn, frostbite, cat and dog bites; preparation of poultices; the nature of delayed speech, enlarged thymus; differentiation of body build; the management of obesity; home exercises; desirable vacations. The index is inadequate if intended for mothers "looking for help."

Chapter I fails to stress early antepartum supervision. The expression "well balanced diet" (p. 7) has no meaning to the public without explanation and example. Contrary to the author's contention (p. 7), carbohydrates are favorable for the expectant mother in the management of vomiting in pregnancy. "Slow convalescence after the birth of the baby" (p. 8) is not necessarily due to vitamin deficiency. "The first breath" does not "purify the blood" (p. 17). "Complemental feeding" does not "interfere with the natural establishment of the breast milk supply" (p. 21). "Closing of the anterior fontanel before the end of the first year" is not "indicative of some disturbances in the mental development" (p. 61), for many infants on antirachitic and base-forming feeding normally show closure before the end of the first year. "The most tangible evidence of progress during the first months of life" is not "the gain in weight" (p. 66), for many other criteria of physical and mental growth are equally significant. There are more important causes of delayed walking than "poor nutrition, weak feet or some recent illness" (p. 70). "Sugars and starches" are not "conducive to the development of poor tooth structure" (p. 76). The criteria of normal physical development (p. 81) are inadequate. "Articles of diet" will change "the breast milk in such a way as to have a deleterious effect on the child" (p. 93) if he is allergic. "Tubercular germs" (p. 120) is a misstatement. "Acid milk is more digestible because cow's milk contains buffering substances which must be buffered in the infant's stomach" (p. 122) is meaningless even to a physician; nor is it correct to state that "buffering can be accomplished by adding lactic acid to the milk before feedings" (p. 122). Contrary to the author (p. 132), minerals are as important in the diet of children as in that of infants. Adolescents, for example, gain markedly in their bony structures. "Dental caries" does not necessarily "occur early in children whose diet is deficient in calcium" (p. 132). On the other hand, dental caries may develop even with the adequate intake of vitamin D. Contrary to the author (p. 133), water given freely with meals interferes with mastication, digestion and the intake of food. The discussion on dehydration is needlessly technical (p. 161). Any pediatrician's practice attests the mother's need of more than a fragmentary statement on the "child who will not eat" (p. 171).

Chapter XIII is wholly inadequate on the emotional development of children. The author is amiss about certain psychologic problems as, for example, truthfulness in children (p. 221). There is less material on forming good habits than on preventing bad habits. The treatment of breath holding spells (p. 227) is ancient. The elaborate vaccination technic (p. 266) is intended for physicians, not mothers. The author feels too hopeless about the management of rheumatic diseases (p. 304). The roentgenogram of a nail in the lung is too terrifying to a frightened mother (p. 324). The author recommends zinc stearate powder in the chapter on infancy and yet at the end of the book (p. 327) states that "because it is so poisonous when drawn into the lung, other powders should be used instead of zinc stearate."

Medical Mycology: Fungous Diseases of Man and Other Mammals. By Carroll William Dodge, Ph.D., Mycologist, Missouri Botanical Garden, St. Louis. Cloth. Price, $10. Pp. 900, with 142 illustrations. St. Louis: C. V. Mosby Company, 1935.

The title of this monograph is misleading. The author is not a physician. His references to the medical aspects of mycoses are incidental and brief. The pathology, diagnosis, prognosis and treatment of the diseases arising from fungous infections are not discussed or at the most only briefly noted. The author is not culpable in this, however, but this condition arises as a result of the undeveloped state of this important field of medical science. As one scans the 160 pages of bibliography which the author has painstakingly perfected the critic finds abundant evidence of the scrappy, inadequate, incomplete and all too often duplicating nature of the professedly original contributions to this field. The real fault lies in the defect in medical education. Bacteriology alone dominates the entire field of infectious and communicable diseases and many, if not all, of those teaching it have never had any training at all, or at the most an inadequate one, in the field of mycology. The situation is even less satisfactory in the training of laboratory technicians.

The inadequacy of current information on the polymorphisms, reproduction, cytology, cultural requirements, pathology and serology of the pathogenic fungi are all too apparent in the contents of this monograph by an expert. There is clearly a lack of concerted attack on any one of the important fungous diseases of man. Possibly this is due to the relative absence of lethal infections, to the superficial sites of the major regions of attack, and to the lack, heretofore, of any comprehensive monograph available for the accurate identification of the major fungous pathogens.

The book here presented attempts to meet this need. It is a systematic handbook of the pathogenic fungi of mammals, with

an all too brief outline of their morphology, life history, physiology, culture, isolation, and the microscopic technic essential to their study. A chapter on botanic nomenclature is inserted to warn off medical multipliers of more synonyms of supposedly more new species of fungi. The long tables of such synonyms appearing after the present names of the better known pathogens bear witness to the difficulties of those who faced the problem with an inadequate knowledge of a confused and often contradictory literature.

There is a systematic classification of the orders, families, genera, species and varieties of fungous pathogens of man and other mammals, largely his domesticated and laboratory stock. Each species or variety has a bibliographic synonymy, brief morphologic description, statement of cultural requirements and results, source or organs infected, and, in a few instances, brief references to the pathologic consequences. Only a few (all too few) are figured. Possibly the author knows how misleading a reliance on a single set of figures may be to the clinician or novice.

In view of the resistance of fungus spores, their extreme viability, their wide distribution and the ease with which they contaminate water, food, the air and everything we touch, it is to be expected that almost any pathologic tissue accessible to these agencies might easily become a culture medium of some contaminating fungus. The culturist of fungi himself must use many precautions in isolating the real cause of a mycosis.

The physician using this monograph must make his own index of infected organs, symptoms and diseases. Mycologists will find this monograph a great boon. All others must become mycologists in order to use it. Thus in time, perhaps a long time, a scientific medical mycology of the skin, hair, nails, ears, gums, tonsils, lungs, intestine, genitals, kidneys and lymphatics may eventually emerge. It can be built on this reliable foundation. This book should be a boon to dermatologists, a great stimulus to new investigation and an indispensable aid in accurate diagnoses, mainly by cultural methods.

Foundations of Short Wave Therapy: Physics—Technics—Indications. An Introduction to the Physico-Technical Principles and Medical Applications of Short Electric Waves for Physicians and Biologists. Physics and Technics by Wolfgang Holzer, Dr.Ing., Assistant in the Physiological Institute of the University of Vienna. Medical Applications by Eugen Weissenberg, Dr.Med., Medical Superintendent of the Short Wave Section of the University Clinic for Nervous and Mental Diseases in Vienna. Translated by Justina Wilson, F.R.C.P., D.M.R.E., and Charles M. Douse, B.Sc., A.M.I.E.E. Cloth. Price, 12s. 6d. Pp. 228, with 53 illustrations. London: Hutchinson's Scientific and Technical Publications, 1935.

This book has been prepared in an attempt at collaboration between physicist and physician on the subject of "short wave therapy." The first 155 pages are devoted to a highly technical dissertation on the physics of short wave diathermy, and the text contains a mass of formulas which, though of probable interest to the highly trained physicist, will prove unintelligible to the average physician.

This first section, written by Holzer, the physicist, deals with the theory of oscillation, the action of electrical oscillations and the technic of short wave measurements and short wave therapy. The author favors the electronic valve generator over the spark gap generator. Holzer presents excellent studies on the electrical fields produced by short radio waves and brings out the significant point with regard to absorption of energy that "wavelengths from 10 meters to 1 meter indicate that the heating output is approximately independent of the specific resistance of the treated material." Holzer claims, therefore, that "the heating effects in all organs will be the same." He further points out that, theoretically, there appears to be little hope of producing a selective effect on different tissues by varying wavelengths. Methods of screening the apparatus to prevent radio interference are discussed. Finally, it is interesting to note that it is recommended that the apparatus for generation of short radio waves to be used by the practitioner "should be capable of providing wavelengths from 3.5 to 15 meters." Practically all the machines used at present by American practitioners produce short radio waves of a single wavelength, and machines capable of varying the wavelength are not available. One may agree with the author that "the output of the apparatus in the patient's circuit should be at least 100 watts, and a higher value, say 250 watts, is desirable."

The second section, written by Weissenberg, the physician, is devoted to medical applications of short wave diathermy. This section compares unfavorably with the first. The author seems unaware of the need for controlled clinical studies of large numbers of cases in any attempt to present the possibilities of a new form of therapy. He repeatedly cites only one or two case reports, with no controls to support his contentions. Weissenberg recommends a new form of low output apparatus with which he gives "weak therapy" treatments. In addition to producing heat energy in the tissues, he attributes to short wave diathermy a direct effect on the nervous tissues.

Despite the authors' conclusion that "short wave treatment—provided that indications and technic are correct—is absolutely without risk or danger" and that "it has proved to be extraordinarily efficient in the treatment of certain diseases," the presentation, particularly from the medical standpoint, does not entirely prove their contentions.

It is recommended that every physician practicing physical therapy attempt to struggle through the first portion of this work, which is devoted to physics; but he should read the second portion with some skepticism. Though it does not seem that the book will be of value to the average medical practitioner, it is an interesting contribution to the growing literature on the subject of short wave diathermy.

History of The Canadian Medical Association, 1867-1921. By H. E. MacDermot, M.D., F.R.C.P. Cloth. Price, $3. Pp. 399, with 9 illustrations. Toronto: Murray Printing Company, Limited, 1935.

The history of any organization is obviously the history of the men who have done most to create it. Dr. MacDermot begins his work with a survey of conditions of medical practice in Canada before 1867. He then discusses early attempts at the formation of the Canadian Association and finally its development at Quebec in 1867. The Quebec Medical Society took the chief initiative in the formation. It is interesting to learn that Dr. William Marsden, who was the active mover, was stimulated by visiting the meeting of the American Medical Association in Cincinnati in May of that year. After discussing the earliest annual meetings, the author summarizes the first twenty-five years and then the next two twenty-year periods. He pays special attention to the work of the association during the war, to the reorganization in 1921 and to the development of medical journals in Canada and of other medical organizations, and he concludes his work with studies of important personalities and the citation of committee reports, legislative regulation and similar matters. The appendix also includes a list of members in 1867 and a list of annual meetings. The book has a useful index.

Short Wave Therapy and General Electro-Therapy. By Heinrich F. Wolf, Consultant, Department of Physical Therapy, Mount Sinai Hospital, New York. Cloth. Price, $2.50. Pp. 96, with 79 illustrations. New York: Modern Medical Press, 1935.

This small volume has been prepared for the purpose of "elucidating electrotherapy methods with the aid of pictures." There is a brief discussion of the technic of diathermy and of short wave diathermy. The author still retains the designation "short wave therapy" and does not use the Council on Physical Therapy's term "short wave diathermy." There are likewise brief discussions of hyperpyrexia by means of diathermy, and of the use of "low voltage and low frequency" currents. This is followed by brief descriptions of electrodiagnosis and the application of static electricity, ultraviolet radiation, minor electrosurgery and electrotherapy in otolaryngology and gynecology. The illustrations show methods of applying diathermy electrodes and short wave diathermy plates or coils. While this book is prepared for the "busy practitioner" who "cannot devote much time to theoretical or technical details," the entire presentation is so sketchy that it would seem that the practitioner might be led into many pitfalls. For instance, the author states that in the treatment of rickets by ultraviolet radiation "the entire body, the back and front alternately, is exposed to the light starting with three minutes at a distance of 3 feet, when using the mercury quartz vapor lamp or the carbon arc lamp." If the practitioner happened to be using one of the more powerful mercury quartz vapor lamps, which produces minimal erythema in thirty seconds at a distance of 3 feet, the dosage recommended by the author would be six times the

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minimal erythema dose, and a severe burn might be produced. Again, in the discussion of "short wave therapy" the author states that the physiologic effect of short waves "differs from that of diathermy and radiant heat in that with the former the capillaries are dilated strongly and persistently, more than the arterioles and large veins." He presents no proof of this contention and it can hardly be supported by the present studies on the physiologic effects of short wave diathermy. While this small textbook will be of interest to physicians skilled in the use of physical agents in the treatment of disease, it falls far short of its avowed purpose of providing a simple explanation of the methods of application of various electrotherapeutic measures for quick reference by the general practitioner. Many of the methods of applying electric currents recommended by the author have not been thoroughly tested and accepted by practitioners as a whole. The general composition of this book is poor, there is no list of illustrations, the index is sketchy, and there are a number of misspelled words.

Traité de physiologie normale et pathologique. Publié sous la direction de G. H. Roger, professeur honoraire de physiologie à la Faculté de médecine de Paris, et Léon Binet, professeur de physiologie à la Faculté de médecine de Paris. Tome X: Physiologie nerveuse (deuxième partie). Par F. Bremer, et al. Fascicules 1 et 2. Boards. Price, 250 francs, per set. Pp. 961; 963-1,579, with 275 illustrations. Paris: Masson & Cie, 1935.

This large volume in two parts keeps up well the standard set by the previous issues of this ambitious work, although the different chapters are of unequal merit. Curiously enough, this monographic treatment of normal and pathologic physiology of the nervous system leaves out the cerebrum entirely, except as it comes in incidentally in the long detailed chapter on the cranial nerves. There is also considerable overlapping in the treatment of material; for example, there is a seventy page chapter on the physiology of the skin, in addition to a long chapter on the cutaneous senses. There is also considerable repetition in the two chapters on the cranial nerves and those on the special senses and the autonomic nervous system. The chapter (107 pages) on speech is really a monograph by itself, written by Professor Froment of Lyons. There is also more anatomy and histology than is usually included in the normal and pathologic physiology of the nervous system in British and American textbooks.

A Diabetic Primer for Children. By Ella M. Coleman, B.S., Assistant Dietitian to Mount Sinai Hospital, N. Y., and Alfred E. Fischer, M.D., Adjunct Pediatrician and Chief of the Children's Diabetic Clinic, Mount Sinai Hospital, N. Y. Paper. Pp. 42. New York: The Authors, [n. d.].

Small concise manuals for the diabetic of all ages are of great value. This booklet, the first of its kind for the juvenile patient, gives instructions concerning the principles of diet, metabolism and growth as well as methods of constructing diet, substitutions of foods, analyses of urine, technic and administration of insulin, and the management of coma and hypoglycemia. It could be used in the training of elderly as well as juvenile diabetic patients. Unfortunately, there is no reference to protamine insulin. The latent results of uncontrolled diabetes in childhood could have been emphasized. The authors wisely place the responsibility of treatment with the child.

Width-Weight Tables for Boys and Girls from 1 to 18 Years; for Men and Women from 17 to 34 Years. By Helen B. Pryor, M.D., Assistant Medical Examiner (Women), Stanford University. Paper. Price, 60 cents, single copy; 2 to 4 copies, 50 cents, each; 5 to 9 copies, 40 cents, each; 10 or more copies, 35 cents each. Pp. 15, with tables. Stanford University, California: Stanford University Press; London: Oxford University Press, 1934.

As the author states, the medical profession has long recognized the nutritional status as a factor in determining the state of health. Also the author points out the uselessness of depending on the height-weight-age tables. Then she substitutes a series of tables of her own. As in most of these tables, one cannot place too much dependence on the theoretical normals arrived at by measuring the length of a bone or the distance between two bones. These tables instead of one figure give seven, any one of which may be taken as the proper normal. This table may work well in the hands of experts such as the author, but in the hands of the practicing physician it is merely substituting a newer and more difficult formula for an older one.

Pathopsychologie der Gefühle und Triebe: Ein Grundriss. Von Dr. med. et phil. Kurt Schneider, Honorarprofessor an der Universität München. Paper. Price, 1.20 marks. Pp. 28. Leipzig: Georg Thieme, 1935.

This is an interesting little discussion dealing with the relationship of consciousness and instinct. It consists of a presentation of the author's own point of view, differing little from the psychologic functionalists', and stresses a classification of the various mental characteristics and their interrelationships. The first part deals largely with tabulations of sensory and emotional reactions, while the last half describes synthesis of the various traits in psychopathic and abnormal conditions as well as common characteristic and specific emotional states in them. It is an interesting theoretical contribution which is not particularly important.

Don't Believe It! Says the Doctor. False Notions, Errors, Misconceptions and Misinformation Pertaining to Health and Hygiene, Major Ailments and Cancer, Minor Ailments and Remedies, Food and Diet, Mind and Senses, Body, Marriage and Death; and Health Fallacies Derived from Superstition and Folk-Lore, Exploded and Corrected. By August A. Thomsen, M.D., Lecturer in Medicine, College of Medicine, New York University. With foreword by Harlow Brooks, M.D., Visiting Physician, City Hospital, New York. Cloth. Price, $2.65. Pp. 348. New York: The Author, 1935.

The author has collected into a personally published volume a great deal of common sense material relative to health, but he offers it according to an exceedingly diffuse plan. In other words, by stating a negative on a well established superstition he gives himself opportunity for an extended discussion in the field of hygiene. The same data are much more easily available in better written form in many other currently published books on the subject of health and hygiene.

Los fundamentos científicos y la práctica de la educación física. Por el Dr. D. Rafael Alcalá Santaella, catedrático de la Facultad de medicina de la Universidad de Valencia. Paper. Price, 10 pesetas. Pp. 188, with illustrations. Madrid: Casa editorial Bailly-Bailliere, s. a., 1935.

This monograph emphasizes the importance of physical education in the development of a nation. Santaella asserts that the people of Spain need intensive physical training. His book is written primarily for individuals interested or actively engaged in physical education. There is first a summary of the anatomic structures of the human body. The physiology of respiration, the circulation, the nervous and muscular systems are reviewed. In the concluding section many exercises are described suitable to the proper development of the human body. These are the usual "setting-up exercises" taught in American schools.

Creative Re-Education. By Frederick Peterson, M.D., Ph.D., LL.D. Cloth. Price, $1. Pp. 112. New York: G. P. Putnam's Sons, 1936.

The author of this book is one of the leaders in the field of psychiatry, a man who has contributed from time to time greatly to psychiatric knowledge. His knowledge of the subject and his cultural background are vast but are not indicated in the present volume. This is composed of a number of brief essays dealing largely with the principles of education, what schooling should do for persons, and short discussions on various psychologic traits, such as suggestion and the discovery of talents. It is largely cultural and does not have a very distinct bearing on the problems of medicine, even though written by a medical man. The style is flowing, scholarly, cultured, intelligent, but not very commanding. It should be of more interest to teachers than to physicians, although the latter, particularly mental hygienists, might read it for pleasure. One short essay, on occupational therapy, is significant for the psychiatrist.

Food and Health. By Henry C. Sherman, Mitchill Professor of Chemistry, Columbia University. Cloth. Price, $2.50. Pp. 290. New York: Macmillan Company, 1934.

This is a simply written volume by an eminent authority who feels that the average intelligent person ought to have available correct knowledge relative to basic substances in the human diet. He therefore writes in easy-reading English, telling the facts concerning proteins, carbohydrates, fats, minerals, salts and vitamins. The book is printed in large type and offers in a brief space most of what everybody should know on this subject.

Outposts of Science: A Journey to the Workshops of Our Leading Men of Research. By Bernard Jaffe. Cloth. Price, $3.75. Pp. 347, with 77 illustrations. New York: Simon & Schuster, 1935.

The author of this volume has visited many famous laboratories and talked with many famous investigators with a view to collecting first-hand impressions of current research. Among the medical items are those concerned with heredity in cancer, new work on the vitamins and new work on the glands. Mr. Jaffe approaches this subject as a young man with a frantic admiration for science, and his book is therefore stimulating and inspiring. It will be read with pleasure by every physician.

Bureau of Legal Medicine and Legislation

MEDICOLEGAL ABSTRACTS

Compensation of Physicians: Liability for Medical Services Rendered to Tenants.—The defendant owned and operated a farm on which resided a number of tenants or share-croppers. A Dr. Gephart had for a number of years prior to his death rendered medical services to the defendant and his tenants. The charges for the treatment rendered the tenants were entered in the card system kept by Dr. Gephart under the general entry "Doss Farm" and thereunder specifically to the tenants to whom the professional services were actually rendered. At various times, on receipt of statements of tenants' accounts from Dr. Gephart, the defendant promptly paid the sum called for therein. At the time of Dr. Gephart's death, there remained due him compensation for treatment rendered tenants of the Doss farm over a period of two years. To recover the unpaid balance, the executrix of Dr. Gephart's estate and a physician who had apparently been associated with the deceased brought suit against the defendant. From a judgment for the plaintiffs, the defendant appealed to the Supreme Court of Arkansas.

There was no testimony, said the Supreme Court, that Dr. Gephart rendered professional services to the tenants at the instance or request of the defendant. The charges made by Dr. Gephart in his bookkeeping system were in effect against the tenants and not against the defendant. The entry "Doss Farm," in the opinion of the court, was not a charge against the defendant but was merely an identification used for the purpose of locating the tenants against whom the charges were actually made. The mere fact that the defendant paid to Dr. Gephart sums due by his tenants would not render the defendant liable for all other sums not due, and neither would such circumstances be sufficient to infer a contract therefrom. The testimony, in the opinion of the Supreme Court, was wholly insufficient to show an original undertaking on the part of the defendant to pay for the professional services rendered to his tenants. There was, therefore, no substantial testimony to support the judgment for the plaintiffs, which was consequently reversed and the case dismissed. *Doss v. Gephart (Ark.), 88 S. W. (2d) 62.*

Malpractice: Death Under Anesthesia Attributed to Negligent Preoperative Examination.—Two of the defendants, one the county health director and the other a specialist in diseases of the ear, eye, nose and throat, undertook to remove the tonsils of the plaintiff's 9 year old boy at a clinic conducted by them. During the administration of anesthesia by the third defendant, a lay employee of the specialist, the patient developed what the court referred to as "alarming symptoms" and, despite effort to revive him, died shortly thereafter. The plaintiff, as administrator of the estate of his deceased son, sued the three defendants. The trial court directed a verdict for the defendants, and the plaintiff appealed to the Court of Appeals of Kentucky.

The evidence tended to show that the plaintiff informed the defendants that his son had only recently recovered from influenza, and that he had "rheumatic fever" and "a rheumatic heart." Although the defendant physicians were in possession of this information, it was contended, they proceeded with the operation without subjecting the boy to a thorough examination to determine his fitness to undergo it. The defendant physicians contended, on the other hand, that what they did was in accordance with the duties imposed by law on them and that the methods employed to ascertain the patient's condition were sufficient for the purpose. A duty devolved on the defendant physicians, said the court, to ascertain whether or not the patient's physical condition was such as to enable him to undergo or withstand any required action as a necessary part of the treatment proposed to be administered. A physician, continued the court, who administers or procures the administration of an anesthesia preparatory to a surgical operation is required to possess the same degree of skill and has imposed on him the same obligations as were set forth in *Stevenson v. Yates*, 183 Ky. 196, 208 S. W. 820, as follows:

> The law is well settled . . . that a physician or surgeon is answerable for an injury to his patient resulting from want of the requisite knowledge and skill, or from the omission to use reasonable care and diligence in the treatment of the patient or to exercise such care and diligence to discover the patient's malady. [Citations omitted.] Concerning the standard of knowledge and skill and the required care which the physician should possess and exercise under this rule, it is quite generally agreed that he is bound to bestow such reasonable and ordinary care, skill, and diligence as physicians and surgeons in similar neighborhoods and surroundings engaged in the same general line of practice ordinarily have and exercise in like cases.

In the present case, said the court, more than one witness testified to facts which, if true, tended to show that the defendant physicians either did not possess the requisite skill to discharge the task they assumed to perform or that they negligently and carelessly exercised their skill. The sufficiency of the evidence to support a verdict either way on a general submission of the case to the jury was not before the court for determination. The sole question was whether the trial court correctly directed the verdict for the defendants. Before a court is authorized to direct a verdict, it should be prepared to say that, admitting as true all the testimony on behalf of the party against whom the verdict is directed, and every fair and reasonable inference that might be deducible from it, he has failed to make out his case. Applying that rule to the evidence in the present case, the Court of Appeals felt impelled to conclude that the trial court erred in directing the jury to return a verdict for the defendant physicians but correctly directed a verdict for the defendant lay anesthetist, since there was no proof that she was not competent to perform the task she undertook, or that she administered an excessive amount of the anesthesia. The judgment was affirmed as to the anesthetist but reversed with respect to the defendant physicians.—*Van Sant's Adm'r v. Overstreet (Ky.), 86 S. W. (2d) 1008.*

Society Proceedings

COMING MEETINGS

American Association for the Study of Goiter, Chicago, June 8-10. Dr. W. Blair Mosser, 133 Biddle St., Kane, Pa., Corresponding Secretary.
American Association for the Study of Neoplastic Diseases, Baltimore, June 11-13. Dr. Eugene R. Whitmore, 2139 Wyoming Ave. N.W., Washington, D. C., Secretary.
American Pediatric Society, Bolton Landing, N. Y., June 11-13. Dr. Hugh McCulloch, 325 North Euclid Ave., St. Louis, Secretary.
American Physiotherapy Association, Los Angeles, June 28-July 2. Miss Jefferson I. Brown, Tichenor Hospital School, Long Beach, Calif., Secretary.
Conference of State and Provincial Health Authorities of North America, Vancouver, B. C., June 22-24. Dr. A. J. Chesley, State Department of Health, St. Paul, Minn., Secretary.
Maine Medical Association, Rangeley, June 21-23. Miss Rebekah Gardner, 22 Arsenal St., Portland, Secretary.
Massachusetts Medical Society, Springfield, June 8-10. Dr. Alexander S. Begg, 8 The Fenway, Boston, Secretary.
Medical Library Association, St. Paul, June 22-24. Miss Janet Doe, 2 E. 103d St., New York, Secretary.
Montana Medical Association of, Billings, July 8-9. Dr. E. G. Balsam, 208½ North Broadway, Billings, Secretary.
North Pacific Pediatric Society, Victoria, B. C., June 24-25. Dr. M. L. Bridgeman, 1020 S. W. Taylor St., Portland, Ore., Secretary.
Pacific Northwest Medical Association, Portland, Ore., July 8-11. Dr. C. W. Countryman, 407 Riverside Avenue, Spokane, Wash., Executive Secretary.
West Virginia State Medical Association, Fairmont, June 8-10. Mr. Joe W. Savage, Public Library Bldg., Charleston, Executive Secretary.

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Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL in continental United States and Canada for a period of three days. Periodicals are available from 1926 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested). Periodicals published by the American Medical Association are not available for lending but may be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

Am. J. Roentgenol. & Rad. Therapy, Springfield, Ill.

35: 289-428 (March) 1936

Intubation Studies of Human Small Intestine: V. Motor Effects of Single Clinical Doses of Morphine Sulfate in Normal Subjects. W. O. Abbott and E. P. Pendergrass, Philadelphia.—p. 289.

Id.: VI. Influence of Variations in Reaction and Motility of Stomach Contents on Reaction and Motility of Intestinal Contents. T. G. Miller and W. G. Karr, Philadelphia.—p. 300.

Effect of Foodstuffs on Emptying of Normal and Operated Stomach and Small Intestinal Pattern. I. S. Ravdin, E. P. Pendergrass, C. G. Johnston and P. J. Hodes, Philadelphia.—p. 306.

*Observations on Small Intestinal Physiology in Presence of Calcified Mesenteric Lymph Nodes. R. Golden, New York.—p. 316.

Emphysematous Blebs and Bullae. E. Freedman, Cleveland.—p. 324.

*Roentgen Treatment of Malignancy Using Filtration Equivalent to 5 Mm. Copper. E. A. Merritt and R. R. Rathbone, Washington, D. C.—p. 334.

Indications for Radical Surgery of the Breast. H. Auchincloss, New York.—p. 344.

Place of Interstitial Irradiation in Cancer of the Breast. O. N. Meland, Los Angeles.—p. 348.

Effect of Preoperative Irradiation in Primary Operable Cancer of the Breast. F. E. Adair, New York.—p. 359.

Treatment of Inoperable, Recurrent and Metastatic Carcinoma of the Breast. E. T. Leddy and A. U. Desjardins, Rochester, Minn.—p. 371.

Effect of Ovarian Irradiation on Bone Metastases of Cancer of the Breast. R. Dresser, Boston.—p. 384.

Effect of Radium Irradiation on Electrophoretic Velocity, Viability and Hydrogen Ion Concentration of Escherichia Coli Suspensions. K. P. Dooris, G. E. Ward and F. W. Hachtel, Baltimore.—p. 392.

Physiology of the Small Intestine in Presence of Calcified Mesenteric Lymph Nodes.—Golden observed disturbances in the physiology of the small intestine in seven cases which appeared to have been directly associated with calcified mesenteric lymph nodes. The patients suffered from abdominal pain. They all had calcified mesenteric lymph nodes. Spasm in the loop or loops of the small intestine adjacent to the nodes was noted roentgenologically in four cases, and at operation in another case. Delay in the passage of barium at the site of the calcified nodes was found in four cases. A nine hour ileal residue was present in two cases, and a twenty-four hour ileal residue in another two cases. Delay in the ileum was frequently associated with hypermotility of the proximal part of the small intestine. Active reversed peristalsis in the ileum—not a "pendulum" movement—was seen in one case. Delay in the emptying of the stomach, apparently of reflex origin, was found in four cases. The fact that two conditions occur together does not necessarily mean that one causes the other. However, these disturbances in the physiology of the small intestine seemed to take place in loops of intestine directly adjacent to calcified nodes. The puckering and contraction of the mesentery about them and the distortion of the blood vessels make it seem very likely that the nerve fibers are involved in the process. A mechanism for a disturbance in intestinal physiology would seem to be present. One manifestation of abnormal intestinal physiology observed in these cases is spasm, and spasm of the intestine offers at least one possible explanation for pain. Occasionally a patient says that pressure on the calcified node reproduces the pain for which relief is sought.

Roentgen Treatment of Malignancy.—From their experience with protracted fractional irradiation with hard radiation (0.21 angstrom maximal wavelength, 5 mm. copper equivalent filter), Merritt and Rathbone believe that there is a differential effect on skin or epidermoid structures as a group in contrast to connective tissue or the supporting body structures as the other group. When 0.5 mm. of copper filtration is used there is a moderate difference in the lethal dose between skin and the underlying subcutaneous tissues. As the filter is decreased, with a corresponding softening of the beam, the lethal doses for skin and for the underlying connective tissue approach each other, but never meet. Conversely, as the filtration is increased to 5 mm. of copper, there is a marked widening of the lethal doses for skin and for subcutaneous tissue. Thus the authors feel that increasing the filtration is the best method at one's disposal for protecting the underlying subcutaneous tissues when giving a lethal skin dose. In their treatment of superficial malignant disorders they are impressed with the necessity of producing complete destruction of the skin, as they have yet to permanently destroy a squamous cell carcinoma with less than a blistering dose equivalent to a first degree burn. In the production of these reactions for large areas (15 by 5 cm. and over) heavy filtration is a necessity to insure healing. Heavy filtration is neither necessary nor advocated in giving blistering doses to very small areas, unless cartilage is eroded or involved. They base their conclusions on their daily observations in the treatment of skin carcinoma in which they can readily observe the immediate and late effect on both the tumor and the bed of the tumor. A tin filter qualitatively equivalent to 5 mm. of copper is described. Greater use of filtration equivalent to 5 mm. of copper at 220 kilovolts (peak) is advocated. With such filtration inoperable intra-abdominal malignant conditions are now brought into the field of radiotherapy. Four cases are presented which serve to illustrate the possible uses of increased filtration.

Annals of Otol., Rhinol. and Laryngology, St. Louis

45: 1-304 (March) 1936

Surgical Repair of Facial Nerve Paralyses: Clinical Presentation. A. B. Duel, New York.—p. 3.

After-Care of Surgical Repair of Facial Nerve. T. G. Tickle, New York.—p. 7.

Resection of Entire Thoracic Esophagus for Carcinoma. H. B. Orton, Newark, N. J.—p. 28.

Experimental Analysis of Vestibular Pointing Test. R. M. Dorcus, Baltimore, and O. H. Mowrer, Princeton, N. J.—p. 33.

Preparing Cadavers for Endoscopy. O. V. Batson, Philadelphia.—p. 58.

Effect of Radiation on Ciliated Epithelium. L. H. Heine, Boston.—p. 60.

New Mastoidectomy Incision and Wound Closure. O. J. Dixon, Kansas City.—p. 75.

Allergy of Upper Air Passages: Inherited and Acquired Factors. L. Felderman, Philadelphia.—p. 80.

Allergic Rhinitis. A Panel Discussion by L. W. Dean, J. J. Bronfenbrenner, H. L. Alexander, F. K. Hansel, A. W. Proetz, A. M. Alden, W. F. Wenner, H. M. Smit, C. C. Bunch, B. J. McMahon, J. H. Alexander and L. D. Linton.—p. 101.

Archives of Dermatology and Syphilology, Chicago

33: 605-782 (April) 1936

Dynamics of Cutaneous Morphology: Analytic Study. M. Scholtz, Los Angeles.—p. 605.

Evaluation of Reducing Agents Used in Dermatologic Practice: I. Intensity of Action. T. Cornbleet, Chicago.—p. 624.

Deep Scopulariopsosis of Ulcerating Granuloma Type Confirmed by Culture and Animal Inoculation. A. J. Markley, O. S. Philpott, Denver, and F. D. Weidman, Philadelphia.—p. 627.

*So-Called Libman-Sacks Syndrome: Its Relation to Dermatology. G. H. Belote and H. S. V. Ratner, Ann Arbor, Mich.—p. 642.

Studies in Genus Microsporum: I. Cultural Studies. N. F. Conant, Durham, N. C.—p. 665.

*Aleukemic Myelosis with Cutaneous Nodules. E. F. Zimmerman and H. C. Curtis, Wichita, Kan.—p. 684.

*Lymphedema Occurring with Varicose Veins: Treatment by Injection. H. I. Biegeleisen, New York.—p. 689.

Onycholysis. J. D. Viecelli, San Francisco.—p. 697.

Genesis of Syringoma: Report of Case. H. Homma and D. H. E. Escher, Beirut, Syria.—p. 700.

Darier-Roussy's Sarcoid, with Especial Reference to Its Tuberculous Etiology. E. R. Maloney and F. C. Combes, New York.—p. 709.

*Prevention of Dermatitis Venenata Due to Poison Ivy in Children. M. Molitch and S. Poliakoff, Jamesburg, N. J.—p. 725.

Relation of Libman-Sacks Syndrome to Dermatology.—Belote and Ratner cite a case believed to present the Libman-Sacks syndrome. They are impressed with the succession of infections. Otitis media, pyelitis, bronchopneumonia and again otitis media associated with joint symptoms, renal changes and an almost continuously septic type of temperature certainly seem to point to a sepsis, and yet to them one of the striking features of this group of cases, and of their case in particular, is the fact that repeated blood cultures have been negative.

They believe that this group should be classified as a subgroup of the cases presented by Osler. The question as to whether or not this eruption is actually disseminated lupus erythematosus is of extreme importance, for on its correct answer rests the identity of this condition and erythema multiforme. At the present time one cannot say that they are not grades of the same condition. From the clinical standpoint there is not the slightest doubt that the eruption in this condition resembles closely acute or subacute lupus erythematosus disseminatus. From the standpoint of microscopic changes in the skin in this case the authors are faced with a problem. If the views of Goeckerman and Montgomery are accepted the condition almost certainly is in the erythema multiforme group, not in that of acute lupus erythematosus disseminatus. If, however, the view of Satenstein that microscopically there is nothing in acute lupus erythematosus to distinguish it from erythema multiforme is accepted, it could be either. Kidney changes in acute lupus erythematosus disseminatus apparently are more severe and different in type from those shown in their case or those described for the Libman-Sacks syndrome. From the necropsy material the most important fact is the infrequency of endocarditis in cases in which lupus erythematosus disseminatus was diagnosed before death. When it is realized that, regardless of the changing concept, the original cases of the Libman-Sacks syndrome were predicated on the observation of an unusual verrucous endocarditis at necropsy, it lends color to the belief that this eruption probably is not lupus erythematosus disseminatus. The authors draw the following conclusions, which may be amenable to correction: 1. The so-called Libman-Sacks syndrome is a subvariety of the Osler erythema group. 2. The lupus erythematosus-like eruption of the Libman-Sacks syndrome is erythema multiforme, representing a bacteria-free phase of a previous sepsis.

Aleukemic Myelosis with Cutaneous Nodules.—Zimmerman and Curtis encountered a case of aleukemic myelosis with cutaneous nodules in which the white blood cell count was reduced from 300,000 to 3,000 by irradiation; it remained at that level for several weeks and then slowly rose to 178,000. During this remission no immature cells were noted in the blood smears, and the patient's physical condition improved remarkably. The case was characterized by a sudden onset of hemorrhagic purpura, resulting in rapidly developing and fatal anemia. The absence of palpable glandular hyperplasia and the presence of the most immature type of white blood cells were noteworthy clinical observations. In a case of the diffuse form of an aleukemic process, diagnosis of the type may be difficult because of the immaturity of the cells. The stem cells containing no granules give a negative reaction for oxidase. This was the authors' experience in their case. After a transfusion of blood, some of the immature cells higher in the stage of development, such as myelocytes, stained characteristically, while the blast forms remained unstained. Schultze's modification of the indophenol blue synthesis, which causes a positive reaction in a case of myeloid leukemia and a negative reaction in a case of lymphatic leukemia, is of diagnostic aid. The life expectancy in the most favorable case is less than six months. Roentgen therapy is contraindicated, and transfusions of blood accord only a temporary arrest of the fatal termination in most cases. In a negligible few the chronic form is induced.

Lymphedema Occurring with Varicose Veins.—Biegeleisen purposes to trace the chronic disorder of lymphedema back to its source and to present a new mode of therapy for its relief. The name lymphedema describes only the first stage of the disorder. The end stage is fibrosis, and therefore the whole picture would be more aptly termed fibrolymphedema. The intimate relationship of the venous and lymphatic vessels in the lower extremity was amply brought out by Cruikshank. Phlebitis may cause lymphatic infection, with resulting lymph stasis. This lymphatic block is responsible for the alteration of the tissue known as lymphedema. The lymphatic system may be disturbed by other causes (cutaneous infection by an organism, trauma, filariasis and congenital lymphatic disorders). Whatever its origin, the end result is always the same. Obvious painful phlebitis may precede the hardened discolored lesion or the lesion may supervene on a latent phlebitis to cause an apparently idiopathic lesion. Varicose ulcers may also be the starting point of lymphedema. In this type of involvement the cutaneous infection travels directly into the lymphatics. Once an ulcer is established in an area of lymphedema, healing is obstinate and rare. The lymphedematous process tends to advance. With widespread lymphedema of the entire leg, a condition of elephantiasis may be said to be present. In a case of elephantiasis accompanying varicose veins one does not encounter those acute crises of pain and fever that are noted in cases of other types of the disease. The author's technic, which he has used more than 500 times, attacks the seat of the disturbance in a direct fashion: The principle of the treatment is to open the strangulated lymphatic and capillary circulation. This is done by the injection of Locke's modification of sodium chloride solution through a 13 gage needle with a large bore, directly into the lymphedematous area. Injections are given as often as possible, since they do not inconvenience the patient. A reaction does not occur; the latent infection which is residual in the lymphedematous area is never aroused. In cases of both lymphedema and elephantiasis, subjective improvement is marked after the first few treatments. The pain in a case of lymphedema disappears, and the leg feels lighter and more natural. In every case in which the treatment has been persistently applied, the tissues have first become softer. With the softening of the tissues, the pigmentation becomes lighter and sometimes disappears completely. Lymphatic ulcers clear up definitely. The parts treated become less tender, and the patient loses the leathery sensation that existed before the treatment. The spread of the lymphedematous process stops. The end results obtained depend on the amount of healthy fibrous tissue present in the area, the size of the lesion and the persistence of treatment. The mode of action of this form of therapy is not clear. The results obtained have been so uniformly gratifying that the author presents this report to encourage further study.

Prevention of Dermatitis Venenata.—Molitch and Poliakoff tested the efficacy of poison ivy extract for purposes of immunization. The product used was an alcoholic extract (1:50) of the poison ivy plant made according to the method of Spain and Cooke. Patch tests were done on 292 boys with poison ivy extract in a dilution of 1:100, with an incidence of 22.9 per cent positive reactions. A majority of the boys with positive reactions also gave a history of previous attacks. Forty boys with positive reactions to the patch tests were given injections of poison ivy extract during the entire season, and not one had dermatitis venenata during the course of treatment. Fifty-three children who were not treated contracted ivy poisoning. It is recommended that all children with a history of previous attacks of ivy poisoning be given injections of poison ivy extract during the period of exposure to the plant.

Iowa State Medical Society Journal, Des Moines

26: 171-230 (April) 1936

Influence of Environmental Factors on Posture, with Especial Reference to Psychic Experiences. W. Malamud, Iowa City.—p. 183.
Indications for Removal of Tonsils and Adenoids. L. M. Downing, Cedar Rapids.—p. 187.
Diarrhea in Infants and Young Children. R. H. McBride, Sioux City. —p. 190.
*Gastro-Intestinal Allergy and Migraine in Childhood. M. D. Ott, Davenport.—p. 192.
The Management of the Prematurely Born Infant. J. D. Boyd, Iowa City.—p. 194.
Present Status of Serotherapy in Whooping Cough, Measles, Scarlet Fever and Diphtheria. L. F. Hill, Des Moines.—p. 197.
Sense Defects of Children. Martha M. Link, Dubuque.—p. 201.
Heart Diseases in Workmen's Compensation Litigation. K. Garve, Los Angeles.—p. 204.
Regional Ileitis: Case Report. W. L. Downing and C. V. Allen, La Mars.—p. 206.

Gastro-Intestinal Allergy in Childhood.—Ott is convinced that a great many of the cases of colic in infancy are merely manifestations of food allergy. This is true even in the breast fed infant, as the offending proteins may be excreted in the breast milk. When the gastro-intestinal disturbance is associated with eczema, even in the mildest degree, this probability is greatly increased. Allergic disturbances due to foods may simulate practically any disorder of the gastro-intestinal tract and allergy must be ruled out in any individual who is known to be allergic. During recent years migraine has been

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added to the list of disorders that may be allergic. While no one contends that all migraines are allergic, evidence is accumulating that many of them are. The symptomatology in childhood often varies from that in adults in that the headache may be very slight and entirely overlooked. These children often complain of "dizziness" rather than a headache, but as they grow older the dizziness is replaced by the typical headache. Furthermore in migraine in children there is a picture of periodic gastro-intestinal upsets associated with all the symptoms of migraine which may be overlooked, because the headache is not a predominating symptom. The fact that the child has any headache whatever may be elicited with difficulty and only after careful questioning. Children who have or have had cyclic vomiting commonly develop migraine in later years. The symptomatology of cyclic vomiting and migraine are identical except for the symptom of headache. The author agrees with Balyeat when he states that "symptoms diagnosed as cyclic vomiting in a child with other allergic diseases or whose family tree is saturated with allergy mean migraine." Three cases of migraine are presented in which almost complete relief was obtained by the elimination of certain foods from the diet.

Journal of Bacteriology, Baltimore

31: 317-322 (March) 1936

Study of Species Lactobacillus Plantarum (Orla-Jensen) Bergey et Al. C. S. Pederson, Geneva, N. Y.—p. 317.
Detection of Nitrate Reduction. H. J. Conn, Geneva, N. Y.—p. 325.
Effect of Electrolytes Present in Growth Mediums on Electrophoretic Mobility of Escherichia Coli. J. T. Pedlow and M. W. Litse, State College, Pa.—p. 335.
Concerning Nature of Globoid Bodies. G. A. Legrippo, Philadelphia.—p. 345.
Gram-Negative Bacilli of Genus Bacteroides. J. C. Hesthorne, L. Thompson, Rochester, Minn., and D. C. Beaver, Detroit.—p. 355.
Effect of Certain X-Rays on Electrophoretic Mobility of Escherichia Coli. Margaret E. Smith, M. W. Litse and W. P. Davey, State College, Pa.—p. 375.
Bacterial Growth at Constant Hydrogen Ion Concentration: Quantitative Studies on Physiology of Lactobacillus Acidophilus. L. G. Longsworth and D. A. MacInnes, New York.—p. 387.
Fermentation of Cellobiose by Bacteria. R. P. Tittsler and L. A. Sandholzer, Rochester, N. Y.—p. 301.
Fermentative Variability of Shigella Paradysenteriae Sonne. H. J. Sears and M. Schoolnik, Portland, Ore.—p. 309.
Classification of Group of Escherichia Isolated from Intestinal Tract of Patients with Ulcerative Colitis. Edith E. Nicholls and H. P. Saltz, New York.—p. 313.

Journal Industrial Hygiene and Toxicology, Baltimore

18: 175-276 (April) 1936

*Experiments on Physiologic Properties of Trichlorethylene. H. Taylor, Runcorn, England.—p. 175.
Determination of Injurious Constituents in Industrial Atmospheres: II. Determination of Solvent Vapors in Air by Means of Activated Charcoal. W. A. Cook and A. L. Coleman, Hartford, Conn.—p. 194.
Influence of Working Hours on Health of Worker. L. Ascher, Frankfort-on-Main, Germany.—p. 211.
Examination of Three Hundred Workers in Granite and Sandstone Quarries. S. V. Gudjonsson, with assistance of K. Becker, Copenhagen, Denmark.—p. 215.
Pulmonary Asbestosis: Incidence and Prognosis. J. Donnelly, Huntersville, N. C.—p. 222.
Survey of Group of Employees Exposed to Asbestos Dust. S. B. McPheeters, Charlotte, N. C.—p. 229.
2-Chloro-Butadiene (Chloroprene): Its Toxicity and Pathology and Mechanism of Its Action. W. F. von Oettingen, W. C. Hueper, W. Deichmann-Gruebler and F. H. Wiley, Wilmington, Del.—p. 240.
Toxicity and Potential Dangers of Crude "Dupreno." W. F. von Oettingen and W. Deichmann-Gruebler, Wilmington, Del.—p. 271.

The Chronic Effects of Trichlorethylene.—Taylor investigated the chronic effects of trichlorethylene. Preliminary experiments showed that concentrations in air of 0.5 and 0.4 per cent trichlorethylene vapor produced deep anesthesia in rats, while 0.2 per cent gave only slight narcosis. As a result of these experiments the chronic effects of trichlorethylene were investigated at concentrations of 0.3, 0.2, 0.1 and 0.05 per cent, respectively, with rats as the experimental animals. Two dogs were also exposed to 0.2 per cent trichlorethylene. The experiments were continued for six months, the exposure lasting six hours each day, five days a week. A concentration of 0.3 per cent proved too high and only two of the original six rats survived six months. All the animals in the other concentrations survived with the exception of one accidentally killed in the 0.05 per cent concentration. There was no significant difference between growth curves and similar ones for litter mate controls. Histologic examinations of the livers, kidneys, lungs, tracheas, hearts, spleens, brains and femurs of the experimental rats gave no signs of degeneration in any of the organs. The only abnormal feature observed was a slightly greater tendency to alveolar collapse in the experimental rats as compared with the controls. There was no consolidation or edema. This collapse is generally observed in laboratory rats, and it appears that there is no evidence that the collapse was due to trichlorethylene.

Journal of Pediatrics, St. Louis

8: 277-402 (March) 1936

Effects of Posterior Pituitary Extract on Water and Mineral Exchanges in Edema. I. McQuarrie, W. H. Thompson and Mildred R. Ziegler, Minneapolis.—p. 277.
Generalized Tuberculosis of Lymph Nodes and Multiple Cystic Tuberculosis of Bones: Report of Two Cases. A. W. Jacobsen, Buffalo.—p. 292.
*Further Observations on Comparative Antirachitic Value of Crystalline Vitamin D Administered in Milk, in Corn Oil or in Propylene Glycol. J. M. Lewis, New York.—p. 308.
Lead Encephalopathy in Children. A. Levinson and L. H. Harris, Chicago.—p. 315.
Hemolytic Jaundice with Bone Changes: Case. C. E. Snelling and A. Brown, Toronto.—p. 330.
Cutaneous Lymphoblastoma: Case Report. R. K. Maddock, Honolulu, Hawaii.—p. 338.
Volvulus of Duodenum in the New-Born. A. H. Potter, Springfield, Ohio.—p. 346.
Calcium Deposition Following Intramuscular Administration of Calcium Gluconate: Report of Case in a New-Born Infant. F. H. von Hofe and R. E. Jennings, East Orange, N. J.—p. 348.
Clinical Study of Influence of Vitamin B Supplements: I. Growth and Development During Infancy: II. Maternal Health During Gestation and Labor: III. Lactation. H. L. Elias, Rockville Center, Long Island, N. Y., and R. Turner, New York.—p. 352.
Treatment of Unusual Case of Hemolytic Streptococcic Septicemia: Notes. P. Nicholson, Ardmore, Pa.—p. 363.
Study of Neonatal Mortality: Based on 120,726 Consecutive Deliveries at the Boston Lying-In Hospital from 1873 through 1934. S. H. Clifford, Boston.—p. 367.
The Changing Pediatric Practice. H. E. Stafford, Oakland, Calif.—p. 375.

Antirachitic Value of Crystalline Vitamin D.—To determine the prophylactic dosage of crystalline vitamin D, as well as the influence of the menstruum on the effectiveness of this antirachitic substance, Lewis gave 441 young infants, at the beginning of the winter, 145, 290 or 1,450 U. S. P. X (revised 1934) units of crystalline vitamin D incorporated in 28 ounces (840 cc.) of milk, in 7 drops (0.5 cc.) of corn oil or propylene glycol. At the end of the winter the results demonstrated that rickets developed less frequently in infants receiving crystalline vitamin D in the daily ration of milk than in those receiving a comparable number of units of this antirachitic agent in 7 drops of corn oil or of propylene glycol. It was found that 1,450 units of crystalline vitamin D in oil daily protected forty-one of forty-two infants against rickets. The addition of 332 U. S. P. units of crystalline vitamin D to the quart of milk provided a highly satisfactory antirachitic, milk since only one of fifty-one infants receiving milk of this unitage developed rickets.

Kansas Medical Society Journal, Topeka

37: 133-176 (April) 1936

Self Mutilation in Paranoia. N. Reider, Topeka.—p. 133.
Newer Aspects of Prostatic Surgery. C. K. Smith, Kansas City.—p. 137.
Agranulocytosis: Heavy Parenteral Liver Extract Therapy. H. N. Tiben, Wichita.—p. 142.
*Idiopathic Hypochromic Anemia. M. Snyder, Salina.—p. 143.
Use of Roentgen Ray in Diagnosis of Ileus. H. H. Schneider, Kansas City.—p. 148.

Idiopathic Hypochromic Anemia.—Snyder suggests that in the majority of patients with idiopathic hypochromic anemia there is no history of dietary deficiency and there are many points suggesting that the condition is due to some difficulty in the absorption or utilization of iron by the body. Achlorhydria is almost a constant observation in this condition as it is in pernicious anemia and, as has been pointed out by many, the achlorhydria may be indicative of some defect in the stomach resulting in the diminution of a substance in the gastric secretion that is necessary in the digestion of iron containing foods. Absence or reduction of this element could, by creating a state of iron deficiency in the body, produce anemia

of varying degrees just as absence of the X factor in the gastric secretions will cause pernicious anemia. Whether there is a direct relationship of achlorhydria to this type of anemia is a moot question. It is agreed that anemia is much more common among patients with achlorhydria than among those with normal gastric acidity. That the achlorhydria is merely an indicator of some missing substance in the stomach necessary for normal blood formation appears to be a more likely conception. While the symptomatology of the two diseases is somewhat alike, the blood shows almost directly opposite changes. The two diseases should offer little diagnostic confusion except in an atypical or borderline case. Hypochromic anemia with achlorhydria due to loss of blood, infections or toxemias should not be classified with the idiopathic group but should be called secondary hypochromic anemia or symptomatic achlorhydric anemia. The disease responds in a striking manner to adequate iron therapy. A case is reported that required unusually large doses of iron permanently.

Kentucky Medical Journal, Bowling Green

34: 129-168 (April) 1936

Contract Practice. R. E. Smith, Henderson.—p. 131.
Analgesia in Obstetrics. S. D. Breckinridge, Lexington.—p. 138.
Resuscitation of the New-Born. C. S. Sherman, Millwood.—p. 141.
Postpuerperal Treatment. A. W. Davis, Madisonville.—p. 142.
Arachnidism and Treatment. D. L. Jones, Fulton.—p. 146.
Favus: Report of Case. W. U. Rutledge, Louisville.—p. 149.
Pulmonary Moniliasis: Report of Case. M. Flexner, Louisville.—p. 151.
Present Day Problems with Typhoid Fever. H. S. Frazier, Louisville.—p. 156.

Puerto Rico J. Pub. Health & Trop. Med., San Juan

11: 369-638 (March) 1936

Hematologic Studies on Schistosomiasis Mansoni in Puerto Rico. R. Rodriguez Molina and J. A. Pons, San Juan.—p. 369.
Methods Used to Control Malaria in Puerto Rico. W. C. Earle, L. D. Palacios and A. Arbona, San Juan.—p. 434.
*Forms of Pulmonary Tuberculosis in Puerto Rico. J. Rodriguez Pastor and G. Ruiz Cestero, San Juan.—p. 479.
Tuberculosis in Puertoricans: Review of Six Hundred and Twenty-Eight Autopsies. E. Koppisch, San Juan.—p. 492.
Bacteriologic Study of Normal Throats, Pathologic Throats and Excised Tonsils, Made in Puerto Rico. A. Pomales Lebrón, San Juan.—p. 512.
Bacteriology of Plague: Review. P. Morales Otero, San Juan.—p. 553.
Protoplasmic Longevity, with Particular Reference to Protozoa. G. N. Calkins, New York.—p. 617.

Pulmonary Tuberculosis in Puerto Rico.—Rodriguez Pastor and Ruiz Cestero interpreted the roentgenograms of the chests of 1,000 Puerto Rican patients suffering from pulmonary tuberculosis. One or both apexes were involved in 82 per cent of the cases, the right apex being affected nearly twice as often as the left. In 18 per cent the apexes were clear. The lesions were limited to the upper third of one or both lungs in 46 per cent, to the middle third in 9 per cent and to the lower third in 1.5 per cent. Involvement of the upper two thirds of one or both lungs occurred fourteen times more frequently than involvement of the lower two thirds. In 8 per cent both lungs were involved. The preponderant form of tuberculosis was the fibrocaseous. In 48 per cent, exudative infiltration predominated, while in 52 per cent fibrous infiltration was equal in extent or predominated over the destructive processes. Although patches of caseous pneumonic infiltration were frequent, massive tuberculous pneumonias were distinctly rare. No significant differences could be made out between the forms of tuberculosis occurring in white patients as distinguished from that in Negro patients. Cavities were found in 56 per cent and occurred in 48 per cent more frequently in the right lung than in the left. The frequent location of cavities was the upper thirds of the lungs; next, the middle thirds. Peaking of the diaphragm, marked blurring of the cardiophrenic angle and similar diaphragmatic irregularities interpreted as adhesions were evident in 59 per cent. They were visible six times more frequently in the right than in the left side. Marked deformities due to fibrous tissue, such as displacement of the heart and trachea, were found in 8 per cent of the cases. Total atelectasis of one lung was present in forty cases. Pleural effusions were encountered in only eight cases.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

1: 349-400 (Feb. 22) 1936

Avoidable Disasters. G. R. Girdlestone.—p. 349.
Radiologic Examination of Stomach and Duodenum, with Especial Reference to Early Diagnosis of Cancer. K. S. Cross.—p. 353.
Dercum's Disease and Its Treatment by Deep X-Rays: Case. S. K. Montgomery.—p. 357.
Cesarean Section in Infected Cases: Series of Forty-Five Cesarean Sections in Infected or Potentially Infected Cases, with No Maternal Mortality. Margaret M. Basden.—p. 358.
*Von Gierke's Disease Associated with Amylorrhea. A. E. Naish and T. E. Gumpert.—p. 360.
Aschheim-Zondek Test in Puerperium. F. A. E. Crew.—p. 363.

Von Gierke's Disease Associated with Amylorrhea.—Naish and Gumpert describe a case of von Gierke's (glycogen accumulation) disease in which the presence of amylorrhea, a new manifestation, was observed. They suggest that there are in this condition an inability on the part of the liver to convert animal starch (glycogen) into dextrose and an impaired digestion of vegetable starch in the intestine. Possible mechanisms are discussed, and it is suggested that there is either (1) a disturbance of the p_H in the immediate neighborhood of the glycogen in the liver cells and in the immediate neighborhood of the starch grains in the intestine or (2) an endocrine disturbance, quite distinct from the more familiar ones in that the balance which normally exists between the carbohydrate metabolism hormone of the anterior lobe of the pituitary and insulin is upset. Experimental and clinical observations give strong support to the endocrine theory of origin of this condition. They suggest that the normal balance which obtains between the pituitary body and insulin is disturbed. To account for the amylorrhea is more difficult. So far as the authors know, neither the pituitary body nor its satellites (the adrenal and the thyroid) are concerned with the intestinal digestion of starch, but it has been shown recently by Dodds and his co-workers that the posterior lobe of the pituitary body contains a substance capable of inducing a severe lesion of the acid-bearing area of the stomach—sometimes hemorrhagic and sometimes of the nature of a chronic ulcer. Furthermore, the stomach of an animal that has received an injection of this pituitary extract will not yield hydrochloric acid even after the injection of histamine. It is therefore not inconceivable that the pituitary may have some relation to the interaction of amylase and starch in the small intestine, if only from the point of view of hydrogen ion concentration.

Journal of Physiology, London

86: 117-228 (Feb. 8) 1936

Electrical Studies on the Frog's Labyrinth. D. A. Ross.—p. 117.
Solvent Water in Mammalian Erythrocyte. J. Macleod and E. Ponder.—p. 147.
Method for Determination of Carbon Dioxide Applicable to Blood and Tissues. G. V. Anrep, M. S. Ayadi and M. Talaat.—p. 153.
Effect of Potassium on Excitability and Resting Metabolism of Frog's Muscle. D. Y. Solandt.—p. 162.
Uterine Changes in Experimental Abortion and Their Relation to Parturition. J. M. Rubson.—p. 171.
Influence of Thyroid Feeding on Nembutal Poisoning. E. M. Scarborough.—p. 183.
Anterior Pituitary Extracts and Liver Fat. C. H. Best and J. Campbell.—p. 190.
*Effect of Water Intake on Human Reactions to Reduced Cooling Powers. R. A. Gregory and D. H. K. Lee.—p. 204.
Action of Adrenalin on Serum Potassium. J. L. D'Silva.—p. 219.

Water Intake and Reduced Cooling Powers.—Gregory and Lee describe experiments in which unacclimatized male subjects were exposed to an atmosphere of 95 F. "effective temperature" for six hours and given 100 or 150 cc. of water to drink at intervals of fifteen minutes. It was found that: 1. Maintenance of bodily hydration markedly increases the stability of the thermal equilibrium and reduces the degree of shift of the equilibrium point. 2. The rate of sweating is somewhat increased in the water fed as compared with the subject deprived of water; this may be sufficient to account for the differences in thermal behavior. 3. The circulatory functions are rendered more efficient by hydration, as shown by the increased stability of cardiac rate, its lowered deviation

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from normal and the réduction of symptoms referable to inefficient circulation. 4. There is a definite reduction of urinary chloride excretion during exposure to heat, no matter what the urinary volume. 5. Apart from the concentration of blood consequent on dehydration, there tends to be a decrease during exposure to heat of the ratio between water and protein in the serum. 6. Reduction of urine output below the normal "basal" level found in temperate atmospheres will not occur before a certain level of body dehydration is achieved. 7. Certain disturbances in the acid-base equilibrium of venous blood reduction of carbon dioxide combining power and carbon dioxide content tend to occur during exposure to moderate heat.

Journal of State Medicine, London

44: 125-186 (March) 1936

Endemic Influenza Prevalences of the Three Years 1933, 1934 and 1935, Together with Some Comments Thereon, in the Light of Recent Literature Concerning Influenza. W. H. Hamer.—p. 125.
Public Health Administration in Bermondsey (Past and Present). D. M. Connan.—p. 146.
The Human Element in Factory Efficiency. R. G. Berchem.—p. 169.

Lancet, London

1: 409-462 (Feb. 22) 1936

John Hunter to John Hilton. C. H. Fagge.—p. 409.
Expulsive Force of Uterus During Labor. C. Moir.—p. 414.
*What Is Scarlet Fever for the Clinician? F. G. Hobson.—p. 417.
Intravenous Anesthesia with Pentothal Sodium. R. Jarman and A. L. Abel.—p. 422.
Treatment of Psychoses by Prolonged Narcosis. D. N. Parfitt.—p. 424.

Scarlet Fever and the Clinician.—Hobson quotes clinical cases which he believes prove that: 1. An erythema is inconstant in infections due to a hemolytic streptococcus. 2. It may be a feature of those due to a nonhemolytic streptococcus. 3. Though it is more frequent in infections due to hemolytic streptococci, it is a poor guide to the course, prognosis or infectivity of the disease in a given patient. 4. Infections due to hemolytic streptococci with or without an erythema are generally highly toxic and highly infectious and have a striking association with sequels of all kinds. The appearance of an erythema is probably a favorable sign. 5. An infection due to a nonhemolytic streptococcus may have sequels in no way distinguishable from those due to a hemolytic strain, whether there is an erythema or not. If the foregoing statements and conclusions are sound, the author believes that it is pertinent to consider what alterations or modifications of clinical practice and teaching should be introduced. 1. The executive and primary object of notification is to segregate those liable to spread an epidemic disease. It is admitted by every medical officer of health that strict hospitalization in cases of streptococcic fever in which a rash develops has completely failed to control epidemics, and this is supported by clinical evidence. The notification of "scarlet fever" as at present practiced serves no useful purpose. It confines valuable hospital accommodation to a selected group. The accommodation could be better employed for cases of streptococcic infections selected on clinical grounds or for domestic reasons rather than by an erythema. A much higher standard of isolation is essential because the inmates are not all suffering from the same disease. 2. The public is still prone to regard tonsillitis as a trivial complaint and is still uninformed of the disasters that may follow the neglect of simple precautions; the profession has in this respect neglected its educational function. Isolation of the patient in the home, the use of separate feeding utensils and masking or gargling by the attendants are generally neglected and should be enforced. To confine patients to bed for a minimum of from seven to ten days and to examine the urine in the third week are two measures of obvious clinical value. 3. The use of a swab as a public health measure could, with value to the clinician, be employed not only to identify the Klebs-Löffler bacillus but also the hemolytic or nonhemolytic streptococcus. 4. An increasing number of experienced clinicians believe that it is of proved value to give so-called antiscarlatinal serum in the early therapy of infections due to hemolytic streptococci to relieve symptoms and to prevent complications. The public health service should therefore provide the serum for use in hemolytic infections on the same basis as it provides serum for the treatment of diphtheria.

Presse Médicale, Paris

44: 425-448 (March 14) 1936

Atelectasis and Massive Collapse. Y. Henderson.—p. 425.
*Diagnosis of Pancreatic Disorders by Test of Purified Secretin. M. Chiray and M. Bolgert.—p. 428.
*Artificially Produced Hyperchloridemia. R. S. Mach and F. Sciclounoff. —p. 431.

Diagnosis of Pancreatic Disorders.—Chiray and Bolgert discuss the imperfections and the physiologic tests of the pancreatic function. They propose a new technic for studying the pancreatic secretion. It involves the intravenous injection of two ampules of secretion with the subsequent withdrawal of bile from the duodenum. The lipase and trypsin are estimated by the usual method, but, instead of expressing the results as a curve for each diastase, the arithmetical mean is estimated and recorded. Thus the lowest lipasic and the lowest trypsic activities are determined. The authors conclude from their studies that, if the lowest diastatic activity is normal with a normal volume or above normal volume, no correction is necessary. If the diastatic activity is lower with a normal or low volume, still no correction is necessary. On the other hand, if the volume is higher, the coefficient has to be divided by 0.7 in order to obtain an approximate value for a volume of 100 cc. If the diastatic activity is normal with a volume below 70 cc., the coefficient is divided by 1.4 for a volume between 70 and 35 cc. and by 2 for a volume around 25 cc. Whatever the value of the lowest diastatic activity, if the volume is above 200 cc., the correction must be made by following a given arithmetical formula.

Artificially Produced Hyperchloridemia.—Mach and Sciclounoff attempted to find a method of replacing the isolated measurement of the blood chloride by a functional test which employs the rapidity of absorption of the injection of these salts. They studied in normal persons and in patients in a state of hypochloridemia the blood chloride level after the intravenous injection of 8 Gm. of sodium chloride. They concluded from their observations that sodium chloride injected in the veins of a normal subject disappears from the blood in a few minutes and is fixed in the tissues. Sodium chloride injected in the veins of a subject in a state of hypochloridemia produces an ephemeral elevation of the blood chloride which in one hour practically returns to its original level. The level of the blood chloride in the rechloridated subject does not depend on the value of the dose injected but on the affinity of the tissues for the sodium chloride and their state of saturation. In the course of a treatment of rechloridation by daily injection of sodium chloride the blood chloride is raised slowly and according to the degree to which the tissues are saturated.

Archivio Italiano di Chirurgia, Bologna

42: 581-666 (April) 1936

*Heterotopic Osteogenesis from Epithelium of Urinary Tract. E. Lucinesco and G. F. Cavalli.—p. 581.
Complete Paralysis of Radial Nerve: Surgical Treatment. G. M. Giuliani.—p. 613.
Influence of Vitamins on Healing of Wounds: Experiments. A. Padula.—p. 627.
Granulomas from Licopodium and Talcum Powders Following Laparotomy: Experiments. F. Grieco.—p. 641.

Heterotopic Osteogenesis from Epithelium of Urinary Tract.—Lucinesco and Cavalli report the results of experiments in dogs and rabbits for the production of heterotopic ossification obtained by the following procedures: (1) transplantation of epithelium of the urinary tract (mucosa of the bladder, the ureter and the renal pelvis) into young connective tissues, (2) transplantation of fascia lata into vesical defects and (3) interruption of renal blood circulation by ligation of the renal vessels. The authors conclude that the epithelium of the urinary tract has the property of producing heterotopic ossification of young connective tissues. The property seems to be due to a substance secreted or liberated by the urinary epithelium, which causes precipitation of calcium salts on the collagen fibers. Heterotopic ossification obtained by ligation of the renal vessels is identical to that obtained by transplantation of fascia into vesical defects or urinary epithelium into connective tissues. In all cases the bone metaplasia is due to the presence of urinary epithelium and it takes place in the connective tissues in the vicinity of the epithelium, either trans-

planted (transplantation of urinary epithelium) or naturally present in the structure (transplantation of fascia into vesical defects and ligation of renal vessels), but in both cases without the presence of preexisting bone cells. Osteoblasts from fibroblasts make their appearance when precipitation and fixation of calcium first take place. The classic epithelial disposition of osteoblasts around the connective tissues in process of ossification is seen only in rare cases. Periosteum is a differentiated element of the connective tissues which surrounds the, bone formation late in the process of ossification, in which it seems to play no osteogenic part. In the process of ossification bone trabeculae surround the ossifying zones, in the center of which a thin net of histiocytes and cells of bone marrow with the typical characteristics of young bone tissue appear.

Revista Médica Latino-Americana, Buenos Aires

21: 409-507 (Jan.) 1936

*Treatment of Gonorrhea in Women by Basic Fuchsin. R. Araya.—p. 409.
Dysgerminoma of Ovary: Case. J. C. Ahumada, O. Prestini and A. E. Noguès.—p. 433.
Significance of Elevation of Hilus in Cirrhosis of Upper Lobe of Lung. A. A. Cetrángolo and H. A. Passalacqua.—p. 444.
Dosage of Vitamin C. O. F. F. Nicola.—p. 459.
Action of Climate of Cosquín in Pulmonary Diseases. J. F. Mieres and A. Cima.—p. 465.

Treatment of Gonorrhea by Basic Fuchsin.—Araya reports satisfactory results from the use of a combined treatment of basic fuchsin (parafuchsin methylhydrochlorate or parafuchsin acetate) and aniline in urogenital gonorrhea in women. The solution is prepared with chemically pure basic fuchsin 1 Gm., pure aniline 2.5 Gm., glycerin 10 Gm. and enough distilled water to make 100 cc. The treatment consists in the use of two daily vaginal douches made up of 2 liters of boiled water containing a teaspoonful of the solution and, if possible, a short irrigation with part of this solution in the urethra when infected, and every other day an intra-urethral injection of 2 cc. of the solution and introduction of a strip of gauze, soaked in the solution, in the cervical canal, where it should be retained for a few hours. If Skene's and the periurethral glands are infected they should be treated with the solution. The treatment may also consist in the use of intravaginal ovules prepared with pure basic fuchsin 1 Gm., gelatin 10 Gm., distilled water 30 cc. and glycerin 60 Gm., the patient taking one each night for nine consecutive nights. If the body of the uterus is infected an intra-ureteral injection of 1 cc. of the solution is given, except in cases of uterine retroflexion, in which it is contraindicated because of the possibility of complete absorption of the dye by the uterus. Basic fuchsin penetrates deeply the mucous membranes of the urogenital tract, as proved by histologic studies made by the author. It has a selective bactericidal action on the gonococcus. Its power of penetration into the mucous membranes of the urogenital tract is increased by the power of absorption of the membranes. Its bactericidal properties are increased by its association with aniline to such an extent that even a 1:20,000 solution inhibits the cultural development of the gonococcus in peptone bouillon or ascitic agar left for three days in the incubator.

Medizinische Welt, Berlin

10: 473-508 (April 4) 1936. Partial Index

Body Fluids in Their Relations to Central Nervous System and Its Functions. M. de Crinis.—p. 473.
*Influence of Bile on Resorption of Vitamin C. W. Klodt.—p. 477.
Nonspecific Therapy of Infectious Diseases. H. Lotze.—p. 479.
*Question of Male Climacteric and Its Treatment. W. von Noorden.—p. 484.

Influence of Bile on Resorption of Vitamin C.—According to Klodt, experimentation with cevitamic acid is difficult because of the extremely unstable character of its solutions. Cevitamic acid is readily absorbed in the organism, and it may be assumed that the human and animal organisms have substances that stabilize the cevitamic acid so that it reaches the small intestine unchanged. The resorption takes place chiefly in the upper part of the small intestine. The author made a study of the close relationship to bile that could be detected in investigations on the fate of cevitamic acid in the digestive tract. 1. He found that the bile of man, cattle and sheep considerably retards the oxidation of dilute solutions of cevitamic acid and thus facilitates their resorption in the small intestine. 2. Human and animal bile contain reducing substances that are not identical with cevitamic acid. 3. Bile does not reduce dehydrocevitamic acid. 4. The decomposition of the cevitamic acid in plant juices is likewise considerably retarded by bile.

Question of Male Climacteric.—Von Noorden emphasizes that there is no physiologic threshold beyond which in men, as in women, another physiologic phase begins and that there is no justification to speak of a male climacteric and place it in the years after 50. Such a term as male climacteric does not belong in the textbooks of physiology and pathology. To apply the term to psychic and physical defects that appear with greater frequency at the transition from the second to the third period of life may be permissible but is not advisable, since a physiologic significance may be applied to it. The author concedes that external circumstances may cause changes in a man, but they have no physiologic cause and a comparison with the life threshold which a woman has to pass at the time of the climacteric is inadmissible for physiologic and biologic reasons. The changes that develop in men in the corresponding age originate in all sorts of disturbances and in various conditions of the milieu and of civilized life and, as far as the latter are concerned, are practically unknown to primitive men. Physical and psychic disorders are not restricted to a certain time but rather lead toward old age. Regarding the treatment, the author says that sane attitudes and a natural mode of life are most important. Gonadal therapy is important, even if its action is perhaps only suggestive.

Ugeskrift for Læger, Copenhagen

98: 211-232 (March 12) 1936

Surgical Treatment of Peritonsillar Abscess. R. Schroeder.—p. 211.
Lumbar Anesthesia with Tropacocaine. T. Eiken.—p. 215.
Intracutaneous Reactions with Extract of House Dust and Similar Substances in Bronchial Asthma. H. C. Gram.—p. 219.
*Remarks on Sedimentation Reaction in Coronary Thrombosis. S. Christensen.—p. 221.

Sedimentation Reaction in Coronary Thrombosis.—Christensen finds that the sedimentation reaction is of great diagnostic and prognostic value in coronary thrombosis and myocardiac infarct. The sedimentation reaction always rises after some days of the disturbance; a normal sedimentation reaction in a patient with cardiac pain for some time or for a longer time thus makes the diagnosis of coronary thrombosis improbable. A sedimentation reaction constantly increasing to high values is an unfavorable prognostic sign, while a slow and gradual decrease is a favorable indication.

98: 261-286 (March 26) 1936

*Conservative Surgical Treatment of Kidney and Kidney Pelvis Together with Case of Heminephrectomy. H. Abrahamsen.—p. 261.
Saturation of Patients Having Scurvy with Cevitamic Acid. P. Schultzer.—p. 268.
Eczema Caused by Pantocain. H. Videbech.—p. 278.

Surgical Treatment of Kidney Pelvis.—Abrahamsen reviews twenty cases of hydronephrosis in which treatment was administered in the last three years and reports the five cases of plastic surgery of the pelvis and transplantation of the ureter. Ureteropyelostomy, he says, may be considered when exhaustion calls for rapid and lenient intervention. In his first case of plastic surgery nephrostomy was not done, in spite of infection of the pelvis before operation, and complications set in, necessitating nephrectomy; in the other four cases the postoperative course was uneventful. He advises conservative operation in relatively young patients in good condition, with no or slight infection, with perhaps bilateral renal disturbance and likewise, in case of simultaneous mechanical obstacle, to passage of the urine. If large aberrant vessels are seen on operation, compression of the vessels is recommended, to determine whether the blood supply to the pole of the kidney is compromised, in which event ureter transplantation is indicated. The author says that infections of the more banal kind tend to occur in a double kidney, usually in its lower portion, and describes a case of double kidney with pyuria and coliuria in which cystoscopy and roentgen examination failed to reveal the cause, diagnosis being made after pyelography. Heminephrectomy with removal of the dilated ureter was followed by recovery; on examination, a year later, the patient was well. A case is also reported in which pyelotomy disclosed a membranous pyelitis and nephrotomy was done, with good results.

V 106
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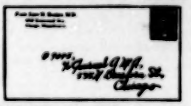

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(Continued on page 33)

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DR. PEPYS' DIARY

May 22.—Arriving in Easton, Pa., where Correll came to the train and at eleven in the morning the Northampton County Medical Society held a meeting and there came many from far and wide which was marvelous to see. Then by motor to Scranton and had a luncheon with the doctors and saw the Moses Taylor Hospital where formerly the great J. Wainwright held forth. So here J. Norman White introduced old Pepys and there was speaking and all saw the hospital and some fine stories told. The doctors everywhere delighted to hear what actions the Association has taken in Kansas City and also with the speech of Landon. Thereafter driving over the new W. P. A. road to Skytop and some fine stories here about the W. P. A. workers especially the one who wanted a shovel so he could have something to lean on. And also about the one who got a new wheelbarrow. And en route to Skytop one passes the Wm. Howard Hay Hayven on the Pocono Mountains and marvels that the idea of "Startled Carrots" and "Easter Bunny Salad" and the incompatibility of proteins and starches could produce such a sanitarium. The fool killer has not caught up with all of them yet!

May 23.—Now awakening at Skytop and lay meditating on what a poor movie was that of George Arliss in "Mr. Hobo" and reading in "We, the Living" by Ayn Lind, a novel of contemporary Russia which shows the sadness of life under the Soviets for those whose spirits are not sustained by the fanaticism which makes a religion out of a government. Then after breakfast greeting Alex Colwell, Maxwell Lick and Billy Mayer and Palmer and John Brennan who have arranged this meeting in the midst of beautiful woods and lakes. And here came also all the district censors to the third councilor district meeting. And before he spoke Pepys heard about how the membership hath grown and the woman's auxiliary are entertaining, individually and collectively, and Palmer told of legislation which shows how alert the medicos must be now that the social agitators would translate all their theories into laws. Then Pepys spoke again and all adjourned for lunch.—Now after lunch to play at golf with White and Davis and Garvey the same being a riotous performance over hills and in the valleys with badinage and persiflage and stories which titillated the diaphragm. And on one hole White was three times out of bounds, the pellet bounding off the porches of the homes of the cottages so that the housewives rushed forth thinking it was Paul Revere and shouting "The British Are Coming!"—Then at dusk driving with Billy Mayer of Pittsburgh and his lady to Sayre, and we went on and on through the night around the mountains and over the bridges and finally the wrong way on the right road 63 miles further than we should have gone. So was there much groaning and recrimination and distress until at last past 1 a. m. we rode into Sayre having visited almost to Williamsport. But it was enlightening to see how adolescent Pennsylvanians

(Continued on page 32)

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(Tonics and Sedatives Continued)

amuse themselves in the road houses and along the side roads much like adolescent Illinoisans and Mississippians. So reminded of the old saying that we closed up the saloons to save our young men and must now close up the side roads to save our young women.

May 24.—Awake not too early and then at 10:30 speaking to the doctors from here and there and the nurses and many others at the Guthrie Clinic and Packer Hospital. Thereafter to luncheon and then as it rained with the delightful lady whom all who admire her call Jerrie Guthrie—and who does not admire her—to inspect the hospital from roof to cellar floor. And it hath been for her a labor of love she knowing every curtain and rug and chair and laboratory and operating room as if it were the apple of her eye. And talking meanwhile of hunting and fishing and books and art and travel and decoration until came dinner time bringing Booth and his lady from Elmira and the Carls from Wilkesbarre and Winters from Waverly and we had trout that Jerrie caught and fine food and drink and much anecdote and laughter. After which old Pepys and this same Jerrie, who performeth notably, won two straight rubbers at bridge against the Carls—and are they good too! So came 10:15 and hastening by train to Detroit.

May 25.—Now in Detroit and here came messages and letters and long distance calls in profusion about the new Pure Food and Drugs Law which has, it seems, eventuated into a misbegotten anomalous hybrid of little likelihood to perform what its progenitors hoped for it. So all day working at this and that. Then at dinner with Gruber and Plaggemeyer and Penberthy and Hirschman and Luce and many others and also the principals of the Detroit high schools. And then dinner in the Wayne County Medical Society home which is a fine structure of stone and steel with beautiful walnut and mahogany paneling and fine decoration, builded as a home for David Whitney and now virtually a gift to the society. So here Pepys told a few stories and then to speak of foods and drugs to some thousands of the Detroit Teachers Association. Yet after one and one-quarter hours of speaking they asked questions for forty minutes longer.

May 26.—All day on the train en route to Manchester, writing of this diary and reading "The Thinking Reed" by Rebecca West and Harvey Cushing's Journal and editing manuscripts.

(Continued on page 34)

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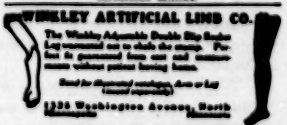

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(Continued from page 29)

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(Continued on page 36)

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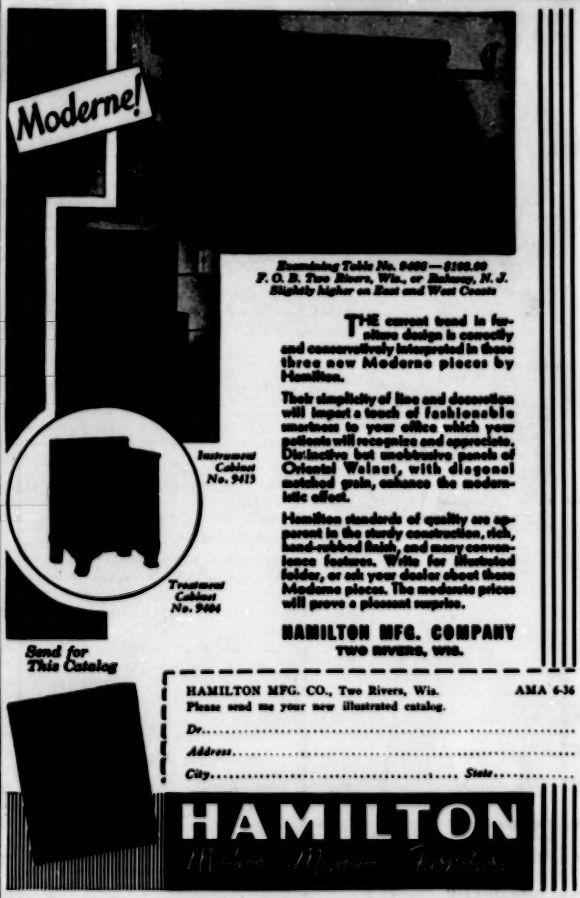

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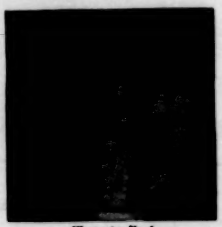

Illustration No. 4
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*Dr. H. O. McPheeters, Minneapolis, Minnesota. J. C. A. O. 52: 1164 (June) 1931

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(Continued from page 33)

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WANTED — PHYSICIAN DESIRES ASSISTANTship, industrial or group clinic work; married, aged 39, Class A graduate; 6 years experience general practice and surgical assistant; last 7 years general medical hospital work; licensed Ohio, Ky. Address 235 I. % AMA.

WANTED—ROENTGENOLOGIST DESIRES DIRECtorship of hospital, clinic or group laboratory; also qualified in bacteriology and routine tissue reading; excellent training in class A schools; Cook County Hospital internship; 3 years' experience; best of references. Add. 232 I. % AMA.

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(Continued on page 38)

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I enclose $9.75. Send me a No. 3610 Biolite, as per the above guarantee.

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(Continued from page 36)

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WANTED — GENERAL OPERATING INSTRUMENTS, good usable condition; also Lewis or other set; could use some equipment small hospital; give list and condition; southwest. Add. 220 M, % AMA.

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FOR SALE—HALF INTEREST IN A SANITARIUM located in a southern state in city of 60,000; established 20 years for the treatment of mild mental, nervous and habit cases (whiskey and drugs); owner is getting old and desires to retire from active management. Add. 241 O, % AMA.

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FOR SALE — ILLINOIS — WELL ESTABLISHED general and surgical practice in community of 15-room hospital; well equipped; can use as residence and hospital; good location; population 4,000; plenty of work; fine cash income from present practice; $4,500 cash and terms. Address Add. 114 M, % AMA.

FOR SALE—IOWA—A LARGE WELL ESTABLished general and surgical practice, including full X-ray, electrocardiograph and laboratory equipment; $1,500; drugs and supplies, for $1,000 cash; special listing. Add. 213 F, % AMA.

FOR SALE—NORTHEASTERN IOWA—UNOPPOSED practice and 5-room office; town of 800, on main highway; surrounding region; good schools; have been 20 years; failing health is reason; cash or terms to suit. Add. 181 F, % AMA.

FOR SALE—LARGE SURGICAL AND MEDICAL practice with all equipment, instruments, furniture and library of successful doctor who was practicing in a prosperous city in Michigan until his recent death; either practice without property or property plus practice; has equal value in terms of price quoted; opening price of $1,000 for goods and $500 for practice; good location; write Deputy of Harlow A. Clark, Attorney, Marquette, Mich. P

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FOR SALE—OKLAHOMA — DERMATOLOGY AND pathology practice, southwestern city 100,000; established 12 years; annual business 5-year checked record; several thousand card records; thorough introduction; part of equipment optional; cash or terms; average $10,000 annually past 5 years; reasonable price for equipment and records only. Add. 186 F, % AMA.

FOR SALE—IDEAL LOCATION FOR WOMAN physician in prosperous city of 30,000, offered by retiring woman physician after 25 years; will introduce; well established practice, office equipment; have excellent local standing; terms most reasonable. 194 F, % AMA.

FOR SALE—CHIEF SURGEONSHIP AND CONtrol of a new, modern, general hospital in a mid-west metropolis; large industrial and natural growing; $75,000 required; would consider good equities and terms. Add. 212 F, % AMA.

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FOR SALE—1 VICTOR-SNOOK CROSS ARM transformer, complete with controls, with glass protective panels; Kenny stabilizer, motor, and overhead; 1 No. 2 Victor combination radiographic and fluoroscopic tilting table, with magnetic timer shift, glass bowl, etc.; 1 Victor counter balanced vertical changer, with magnetic timer; all in perfect mechanical condition; priced for quick sale; terms. Add. 0777 Hollywood Blvd., Room 514, Hollywood. G

(Continued on page 40)

Timely Publications

Prepared by

The Bureau of Medical Economics

SICKNESS INSURANCE, STATE MEDICINE AND THE COST OF MEDICAL CARE (Revised).—A bibliography covering a number of articles on health insurance, state medicine and the cost of medical care published during the past ten years in various periodicals. It was prepared for those who are especially interested in reading in the field of medical economics. Paper, 100 pages. Price, 40 cents. (See Note.)

CONTRACT PRACTICE.—A discussion of the formation of contract practice and the factors which the practice has had. Paper, 24 pages. Price, 10 cents. (See Note.)

INCOME FROM MEDICAL PRACTICE.—A study of gross and net incomes of 6,300 physicians who reported to the Survey and responded to the American Medical Association for the year 1929. 32 pages. Price, 15 cents.

SOME PHASES of CONTRACT PRACTICE.—A discussion of the factors that affect the successful operation of medical care under contract schemes. 15 pages. Price, 10 cents.

MEDICAL RELATIONS UNDER WORKMEN'S COMPENSATION.—A description of the development of the medical phase of workmen's compensation laws in the United States. 127 pages. Price, 50 cents.

GROUP PRACTICE.—A report of the extent of and methods used in group practice. 44 pages. Price, 15 cents.

AN INTRODUCTION TO MEDICAL ECONOMICS.—A discussion of the economic principles involved in the practice of medicine and a differentiation between the economics of industry, commerce and business, and the economics of medicine. 32 pages. Price, 15 cents.

NEW FORMS OF MEDICAL PRACTICE.—A description and analysis of a number of different forms of contract practice organizations and group hospitalization plans, including the insurance plan in operation in England. 64 pages. Price, 15 cents. (See Note.)

A CRITICAL ANALYSIS OF SICKNESS INSURANCE.—An analysis of the sickness insurance systems in foreign countries. 91 pages. Price, 15 cents. (See Note.)

SICKNESS INSURANCE NOT THE REMEDY.—A description of certain phases of sickness insurance to which attention is called in some of the objectives of sickness insurance which are not attained by insurance. 32 pages. Price, 5 cents. (See Note.)

HEALTH INSURANCE IN ENGLAND AND MEDICAL SOCIETY PLANS IN THE UNITED STATES.—A description of health insurance in England and some of the medical service plans in the United States operating without the use of the insurance principle. 17 pages. Price, 5 cents. (See Note.)

SICKNESS INSURANCE AND SICKNESS COSTS.—A discussion of sickness insurance and the costs of medical care intended for the lay public. 17 pages. Price, 5 cents. (See Note.)

SICKNESS INSURANCE CATECHISM.—A discussion of sickness insurance in question and answer form. 15 pages. Price, 5 cents. (See Note.)

PREPAYMENT PLANS FOR HOSPITAL CARE.—An analysis of group hospitalization plans. 19 pages. Price, 5 cents. (See Note.)

GROUP HOSPITALIZATION CONTRACTS ARE INSURANCE CONTRACTS.—An inquiry into the legal status of group hospitalization contracts in various states as determined by a survey of letters from state insurance commissioners. 11 pages. Price, 10 cents. (See Note.)

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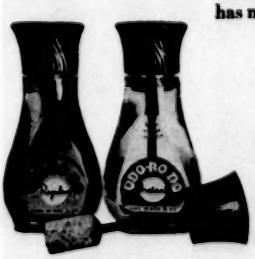

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(Continued from page 38)

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APPARATUS AND INSTRUMENTS

A NEW AUDIOMETER WHICH AIDS IN THE prescribing of hearing devices, as well as for measurement of hearing loss, is announced by the Sonotone Corporation on page 6. The instrument operates from AC or DC current without "hum," and permits instant reading of hearing loss from one dial. The manufacturer will be glad to supply full details, prices and terms, upon request.

SCREEN X-RAYS

FOR RELIABLE FLUOROSCOPIC DIAGNOSIS, the Patterson Type H X-Ray Screens certainly merit consideration. They give greatly increased brilliancy, all-around sharper detail, and operation at lower X-Ray intensities. They are advertised in this issue, page 15, and any dealer will be glad to give a demonstration.

DRUG ADDICTS

DRUG AND ALCOHOLIC PATIENTS ARE HUmanely and successfully treated in Glenwood Park Sanitarium, Greensboro, N. C.; reprints of articles mailed upon request. Address W. C. Ashworth, M.D., Owner, Greensboro, N. C.

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AN APPETIZING CHEESE FOOD FOR THE HIGH protein diet of either children or adults is Velveeta, a product of the Kraft-Phenix Corporation. In addition to its protein content, it is a good source of vitamin A, and is as digestible as milk itself. Further information concerning it is presented on page 19.

BECAUSE THEY WANT TO GIVE PHYSICIANS the real facts about "Canned Foods and the Public Health," the American Can Company is running a series of monthly discussions on the subject, and they'll appreciate a post card from you suggesting what phases of canned foods knowledge are of greatest interest. On page 19, this issue, you'll find some interesting truths about "Food in the Open Can."

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(Continued on page 43)

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*Laryngoscope Feb. 1935, Vol. XLV, No. 2, 149-154
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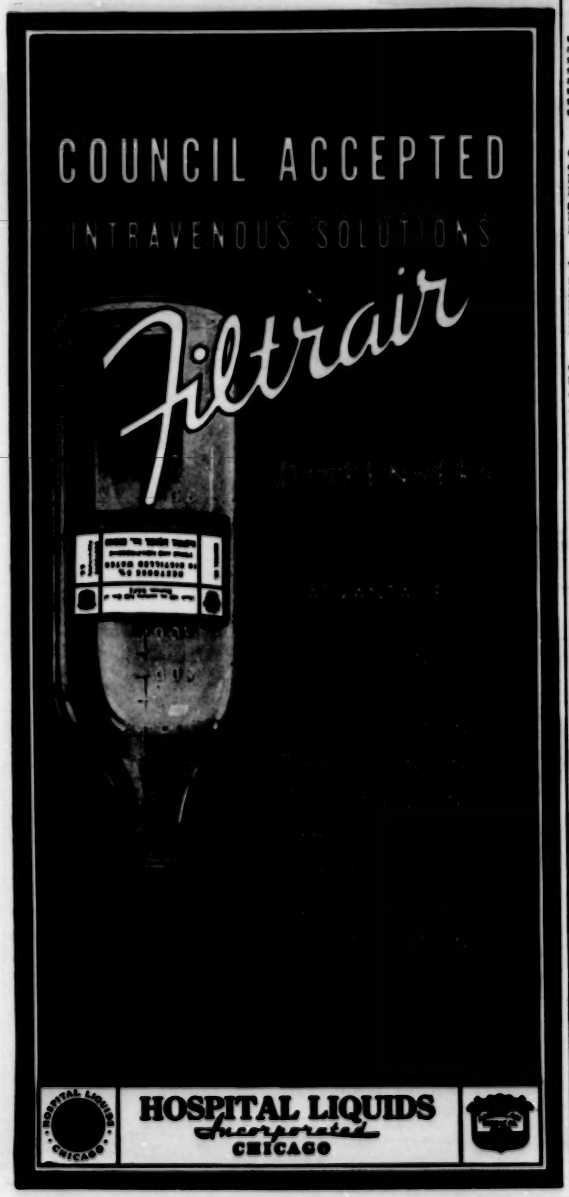

Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for more extensive review in the interests of our readers and as space permits. Books listed in this department are not available for lending. Any information concerning them will be supplied on request.

THE MORTALITY FROM THE PRINCIPAL CARDIOVASCULAR-RENAL DISEASES: A STUDY OF THE EXPERIENCE AMONG THE INDUSTRIAL POLICYHOLDERS OF THE METROPOLITAN LIFE INSURANCE COMPANY 1911 TO 1930. Monograph four in a twenty-year mortality review. Paper. Pp. 80. New York: Metropolitan Life Insurance Company, [n. d.].

THE INTERNATIONAL MEDICAL ANNUAL: A YEAR BOOK OF TREATMENT AND PRACTITIONER'S INDEX. Editors: H. Letheby Tidy, M.A., M.D., F.R.C.P., and A. Rendle Short, M.D., B.Sc. Fifty-fourth year, 1936. Cloth. Price, $6. Pp. 555, with 154 illustrations. Baltimore: William Wood & Company, [n. d.].

MEDICAL RELATIONS UNDER WORKMEN'S COMPENSATION, REVISED. A Report Prepared by The Bureau of Medical Economics, American Medical Association, with Revision as of July, 1935. Second edition. Paper. Price, 50 cents. Pp. 176. Chicago: American Medical Association, 1935.

LA RADIOGRAPHIE EN OPHTALMOLOGIE: ATLAS CLINIQUE. Par Edward Hartmann, ophtalmologiste des hôpitaux de Paris. Rapport présenté à la Société française d'ophtalmologie (le 12 Mai 1936). Cloth. Pp. 272, with 391 illustrations. Paris: Masson & Cie, 1936.

ÜBER DAS ZWÖLFFINGERDARMGESCHWÜR. Von Prof. Dr. P. Clairmont, Direktor der Chir. Univ.-Klinik, Zürich. Vorträge aus der praktischen Chirurgie, Heft 7. Herausgegeben von Prof. Dr. Erich Lexer. Paper. Price, 1.80 marks. Pp. 29. Stuttgart: Ferdinand Enke, 1936.

SBAZ V LYUDIAH PATOLOGICHNA ANATOMIYA, KLINIKA PATOGENEZ, PATOFIZIOLOGIYA. [By] N. M. Krol. Le rage chez l'homme: Anatomie pathologique, clinique, pathogénèse et pathophysiologie. Paper. Price, 7 krb. Pp. 355, with 33 illustrations. Kharkov: Derzhmedvidav, 1936.

EYE, EAR, NOSE AND THROAT MANUAL FOR NURSES. By Roy H. Parkinson, M.D., Head Oculist and Aurist to St. Joseph's Hospital, San Francisco. Third edition. Cloth. Price, $2.25. Pp. 232, with 73 illustrations. St. Louis: The C. V. Mosby Company, 1936.

PHYSICAL THERAPY FOR NURSES. By Richard Kovács, M.D., Clinical Professor and Director of Physical Therapy, Polyclinic Medical School and Hospital, New York. Cloth. Price, $2.75. Pp. 286, with 78 illustrations. Philadelphia: Lea & Febiger, 1936.

AN INTRODUCTION TO MEDICAL ECONOMICS: AN OUTLINE. Prepared by The Bureau of Medical Economics, American Medical Association, Revised in 1935. Second edition. Paper. Price, 15 cents. Pp. 108. Chicago: American Medical Association, 1935.

MANUAL OF EMERGENCIES, MEDICAL, SURGICAL AND OBSTETRIC: THEIR PATHOLOGY, DIAGNOSIS AND TREATMENT. By J. Snowman, M.D., M.R.C.P. Third edition. Fabrikoid. Price, 10s. Pp. 401. London: John Bale, Sons & Danielsson, Ltd., 1936.

TREATMENT OF FRACTURES IN GENERAL PRACTICE. By W. H. Ogilvie, M.D., M.Ch., F.R.C.S. Volumes I and II. Second edition. Cloth. Price, 2 s. 6d., per set. Pp. 108; 109-180, with 37 illustrations. London: John Bale, Sons & Danielsson, Ltd., 1936.

(Continued on page 44)

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(Continued from page 40)

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BOOK-BINDING

IF YOU WANT TO BIND YOUR COPIES OF THE JOURNAL A.M.A. for inspection in your permanent library, you may be interested to learn that it can be done by the American Ink Book Bindery. For only $2.50 they bind eight issues (half year) in simple, first-class fashion. Also they'll be glad to send estimates for binding other periodicals. Their announcement appears on page 39.

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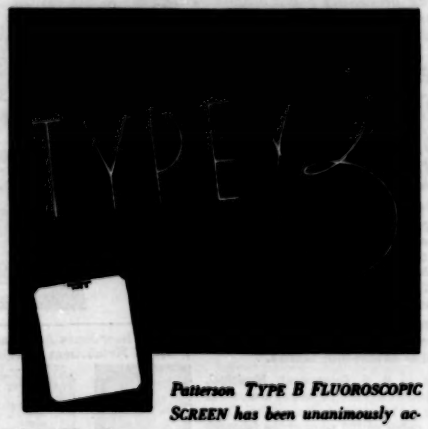

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Mr. Pressey, 3367 Race Street
Phone: Evergreen 0256

CLEVELAND
Mr. Burgston, 7711 Euclid Ave.
Phone: Endicott 1673

DETROIT
Mr. Niedelson, Phone: Columbia 0100

MILWAUKEE
Mr. Olson, 4100 N. 34th Place
Phone: Hilltop 4145

DALLAS
Mr. Zielinski, 928 S. Clinton
Phone: 6-1638

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Mr. Zielinski, 1314 City Park Drive
Phone: Fairfax 8219

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(Books Received Continued)

STUDIES FROM THE CONNAUGHT LABORATORIES, UNIVERSITY OF TORONTO. J. G. Fitzgerald, M.D., LL.D., Director. Volume VII, 1935. [Reprints.] Paper. Various pagination, with illustrations. Toronto: The University of Toronto Press, 1936.

SYNOPSIS OF DISEASES OF THE HEART AND ARTERIES. By George R. Herrmann, M.D., Ph.D., Professor of Clinical Medicine, University of Texas. Cloth. Price, $4. Pp. 344, with 91 illustrations. St. Louis: The C. V. Mosby Company, 1936.

CLINICAL HEART DISEASE. By Samuel A. Levine, M.D., F.A.C.P., Assistant Professor of Medicine, Harvard Medical School. Cloth. Price, $5.50. Pp. 445, with 97 illustrations. Philadelphia & London: W. B. Saunders Company, 1936.

EIGHTEENTH ANNUAL REPORT OF THE NATIONAL RESEARCH COUNCIL, DOMINION OF CANADA, CONTAINING THE REPORT OF THE PRESIDENT AND FINANCIAL STATEMENT, 1934-1935. Paper. Pp. 158. Ottawa, Canada, [n. d.].

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